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3dcreative

James Busby

We chat with Ark VFX artist, James Busby. Find out what he has to say inside!



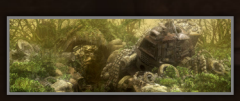
Articles

Halo 3 & "How do you take time...?"



Interviews

James Busby, 'SOFA Studio' & 'Pacificom Multimedia'



Galleries

Krishnamurti M. Costa, Tamás Tóthfalussy, Ognian Bonev and more!



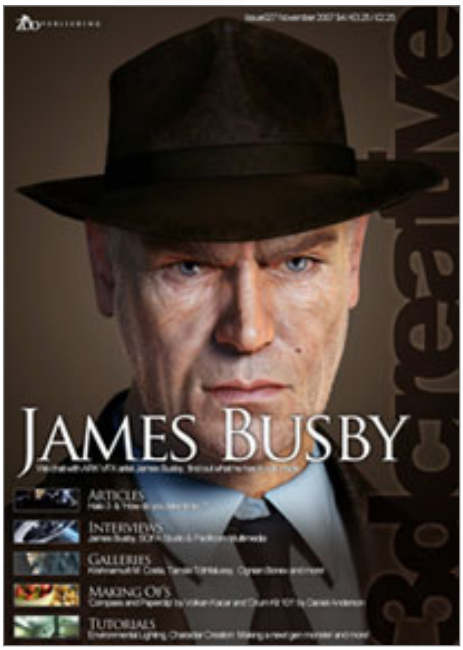
Making Of's

'Compass and Paperclip' by Volkan Kacar and 'Drum Kit 101' by Daniel Anderson



Tutorials

'Environmental Lighting', 'Character Creation: Making a Next Gen Monster' and



Editorial

Welcome to 3DCreative Issue 27. This month we feature the penultimate instalment of the '3D Environment Lighting' tutorial series, so be sure to flip to the back of the magazine to check out how to light an interior scene by candlelight! If you've missed any of the previous parts of this series, don't fret - you can pick up all the back issues of 3DCreative Magazine here: http://www.3dcreativemag.com/issues.htm. Tutorial-wise, we also have a couple of other treats for you this month, of course; Wayne Robson has written a great little tutorial on his 'speed sculpting' techniques in ZBrush, which is a definite must-read, and the talented Gavin Goulden has also created a special tutorial for us on how to create a next gen character (part two will follow next month)! Both are great reads - check out the page numbers for this month's content on the right! We've also put together a great variety of interviews for you this month, featuring the extremely talented James Busby from Ark VFX, as well as two rather different studio interviews; we talk to the co-founder and director of the up-coming animation studio, SOFA Studio, and we also catch up with Darrell Ratliff from the architectural visualisation company, Pacificom Mulitmedia. So be sure to check them all out whilst you're taking a breather from all that hard-core 3d-ing this month!

Enjoy this month's issue! Ed.

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Magazine Viewing Tips

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To view the many double-page spreads featured in 3DCreative magazine, you can set the reader to display 'two-up', which will show double-page spreads as one large, landscape image:

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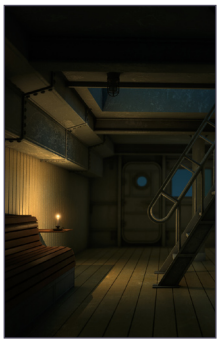
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CONTRIBUTING ARTISTS

Every month, many creatives and artists around the world contribute to 3DCreative magazine. Here you can read all about them. If you would like to be a part of 3DCreative or 2DArtist magazines, please contact lynette@zoopublishing.com

3D Environment Lighting



These wonderful people are responsible for creating our new 3D Environment Lighting Tutorial series for 3ds Max, Cinema 4D, LightWave, Maya & Softimage XSi. Most of them have been with us since the Joan of Arc series and many also worked on the highly popular Tuc-Tuc series...



Florian Wild



Otherwise known as "Floze" since kindergarten (even by his Grandma), started CG when he was eight, with Dpaint & some very basic 2D animation software. He wanted to create fabulous worlds, such as the ones he discovered in games like Monkey Island, Le-Chuck's Revenge. He started 3D when he was 15, & got into the industry at 18. He currently works as a buccaneer Artist & TD.

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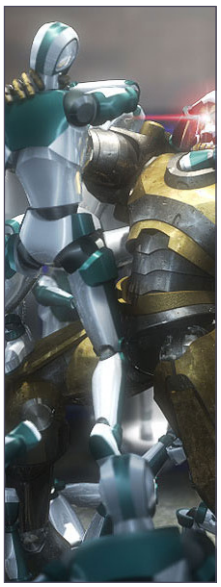


Luciano Iurino

Started back in '94 with 3DStudio on MS-Dos as a Modeller/Texture Artist. In 2001, he co-founded PM Studios and still works there as Lead 3D Artist. They recently developed the videogame "ETROM – The Astral Essence". He also works freelance for magazines, web-portals, GFX & videogame companies. He recently left the 3DS Max environment to move on to XSI.

iuri@pmstudios.it





Giuseppe Guglielmucci



Is a Freelance 3D Modeller/Animator. He began using computers with the epoch of the vic20 & Cinema4d was his 1st 3D software. He started working in the field of CG in 1999 in Commercial Design. In '03 he worked on "ETROM - The Astral Essence", an RPG video-game for PC, developed by PMstudios. He currently hopes to work in the video-games industry & develop his own game.

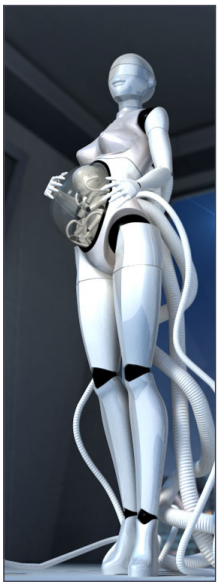
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Niki Bartucci

Is a Freelance 3D Modeller, in Italy. She started working in the field of Computer Graphics in 2000 as an Illustrator & Web Designer. In 2003 she started using 3D software, such as C4D & 3DS Max. In that year she worked on "ETROM - The Astral Essence", an RPG video-game for PC, developed by PMstudios. She is currently a freelancer, specialising in commercials.

niki@pikoandniki.com www.pikoandniki.com



Would You Like to Contribute to 3DCreative or 2DArtist Magazine?

We are always looking for tutorial artists, gallery submissions, potential interviewees, Making Of writers and more. For more information, send a link to your work here: **lynette@zoopublishing.com**

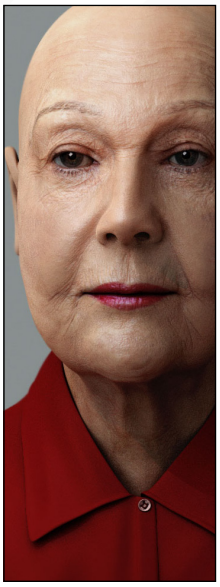


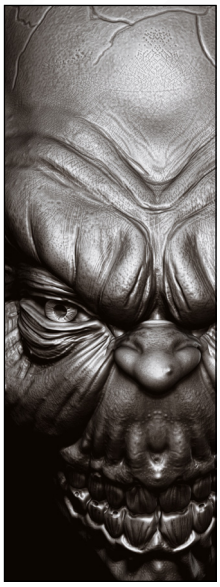
James Busby

Is a 27 year old 3D Artist from Belfast who's mostly into character modelling although he actually does a bit of everything. He's been working professionally now for about 5 years, most of which has been spent at Ark VFX. Other hobbies include movies (obviously) cars, travelling, climbing and generally trying not to take things too seriously.

http://cardboarddog.cgsociety.org/gallery/

jabusby@hotmail.com





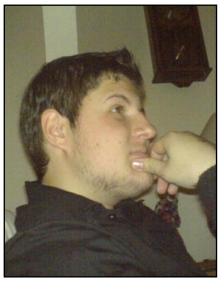
Wayne Robson



Wayne Robson is a freelance digital artist & professional author living in Durham, England, behind a keyboard. He's sure he had a life at some point, but isn't quite sure where it disappeared to (he's quite sure he did have one at some point, though). Wayne's DVDs are available through Kurv Studios, including his series 'Get into ZBrush'.

http://www.dashdotslash.net

wayne@dashdotslash.net

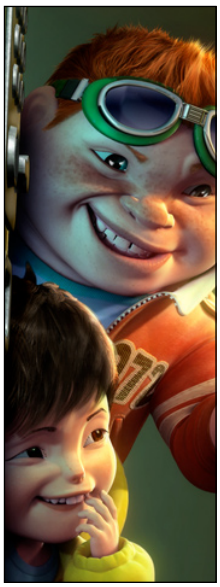


Daniel Anderson

Is a 19 year old student currently living at home, in Ireland, where he's currently studying game design. He's basically interested in anything that has a pixel associated to it! He uses 3ds Max and V-Ray for rendering and modelling, and is still relatively new to the whole 3D thing – although he's sure he's moving pretty fast! He also uses Photoshop, Paintshop Pro, ZBrush… too many to name really!

thevoxmusic1@hotmail.com





Vick Wang



Is the director and co-founder of SOFA Studio, and is an acclaimed Animation Director and VFX Supervisor. He developed his technical and artistic expertise working in the international CGI film and commercial production scene, collaborating with many production companies across the globe.

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business@sofastudio.com



Gavin Goulden

Is a Freelance Character Artist based in Vancouver, BC. He has over 3 years of experience ranging from mobile to next generation games, and specialises in creating high detailed characters. He has contributed multiple tutorials to the community, and can often be seen posting on game art forums and participating in game art competitions. See his online portfolio: http://www.gavimage.com

gavin@gavimage.com





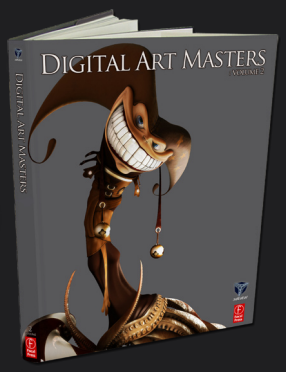
Volkan Kacar



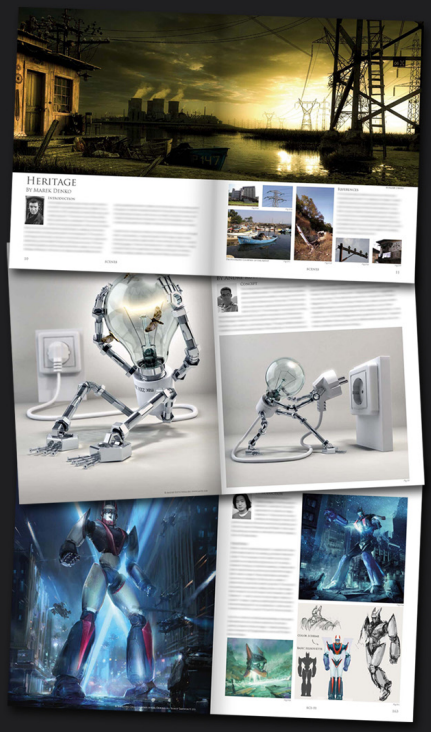
Volkan Kacar was born in Turkey in 1982. He "met" CG and 3ds Max in 1999-2000, and learned 3ds Max through just a book. Since then he has worked with a couple of architectural design companies, using his CG skills. He now works on compositing and architectural design as a freelancer, and more lately he has introduced modo to his hobbies.

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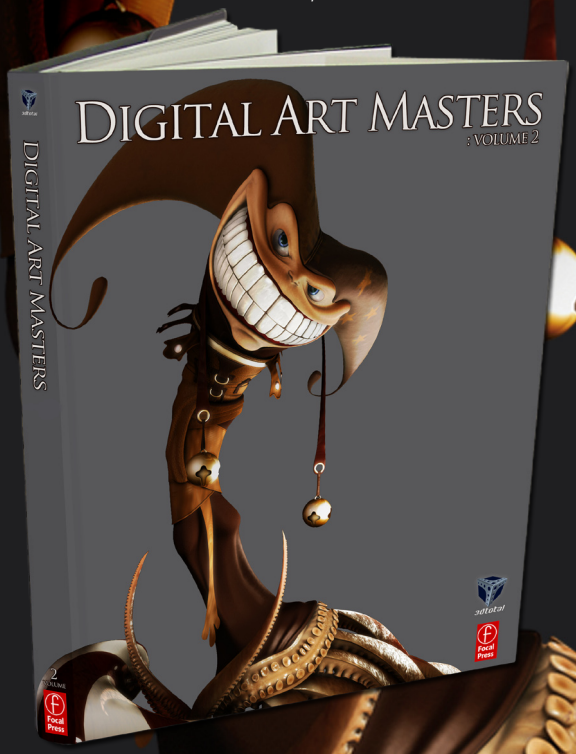
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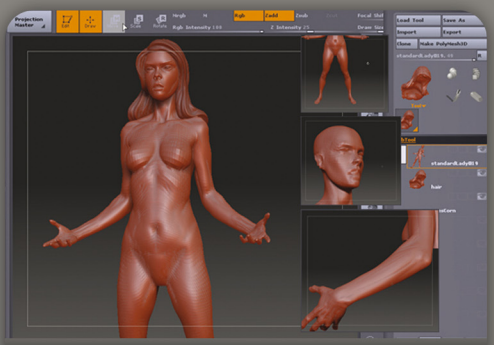
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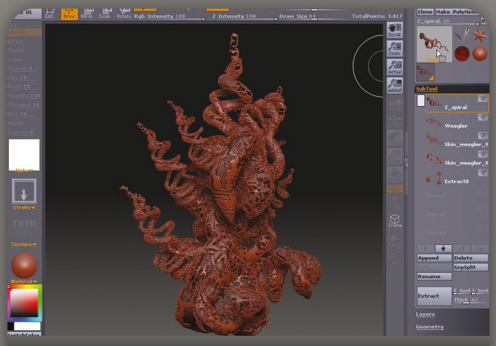
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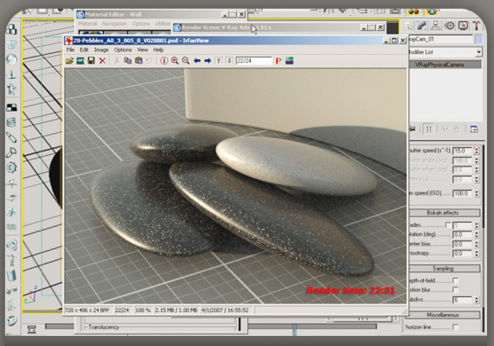
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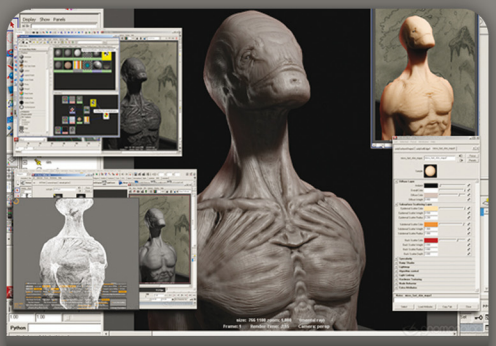
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BUSBY JAMES



"...THERE'S ALWAYS ROOM FOR IMPROVEMENT, AND THE DAY YOU SIT DOWN AND LOOK AT A PIECE AND SAY "THAT'S PERFECT", IS THE DAY YOU STOP TRYING..."

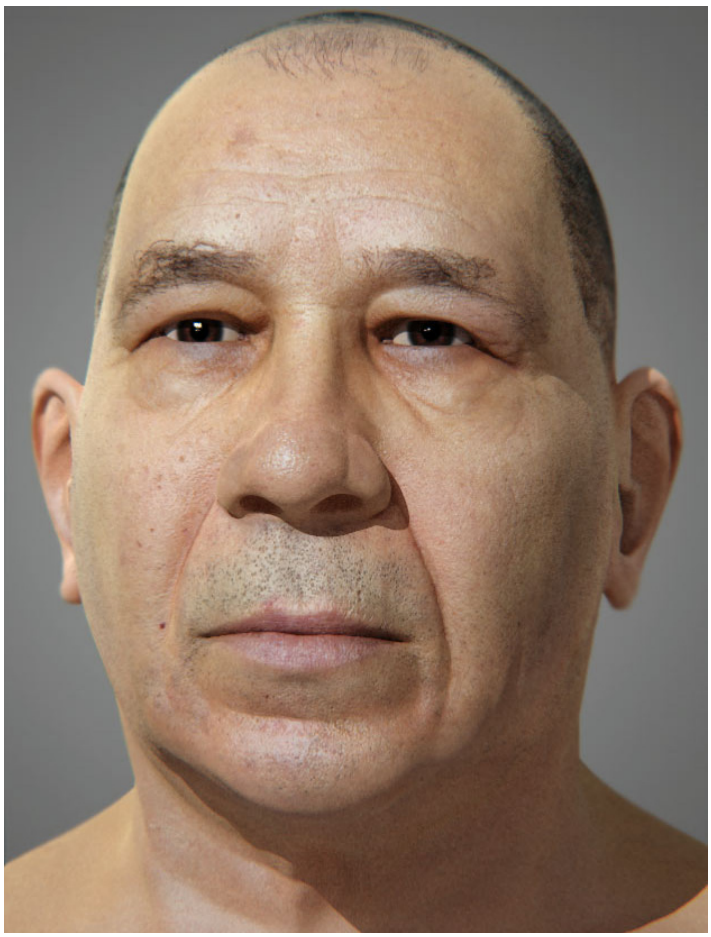
From trying to sneak something disgusting into one of his team mate's cups of tea, to creating visually stunning characters for the Driver: Parallel Lines cinematic, James Busby is one of the talents working for Ark VFX, who has taken some time out this month to chat with us...

Busby James



Hi James, could you introduce yourself to our readers and tell us why you chose to become a 3D artist?

Hi Chris, my name is James Busby, I'm 27 years old and I grew up in Northern Ireland, just outside Belfast. For as long as I can remember I've been interested in art in some form or another, and I always knew that I wanted to work in the entertainment industry. I was lucky enough to have very understanding parents who supported me throughout my early education, where I made what were considered at the time to be fairly obscure and miss-matched GCSE choices: Media Studies and IT. After high school I studied Media and Film at college for a further 2 years, and it was there that I started dabbling with 3d Studio R4, using it to create some very primitive digital sets and props for various film projects. In 1998 I moved to Bradford to study Electronic Imaging and Media Communication, where I began to develop my 3D modelling and animation skills. In the summer of 1999 my friend and I spent 3 months making a fully animated science-fiction short, called "The Human Race". We had no idea what we were doing and had very little technical knowledge, but we ended up producing almost 2 minutes of animation and winning first place in the 'Cinemagic Film Festival', in Ireland. From that point on I was hooked and knew I wanted to work in the CG industry.

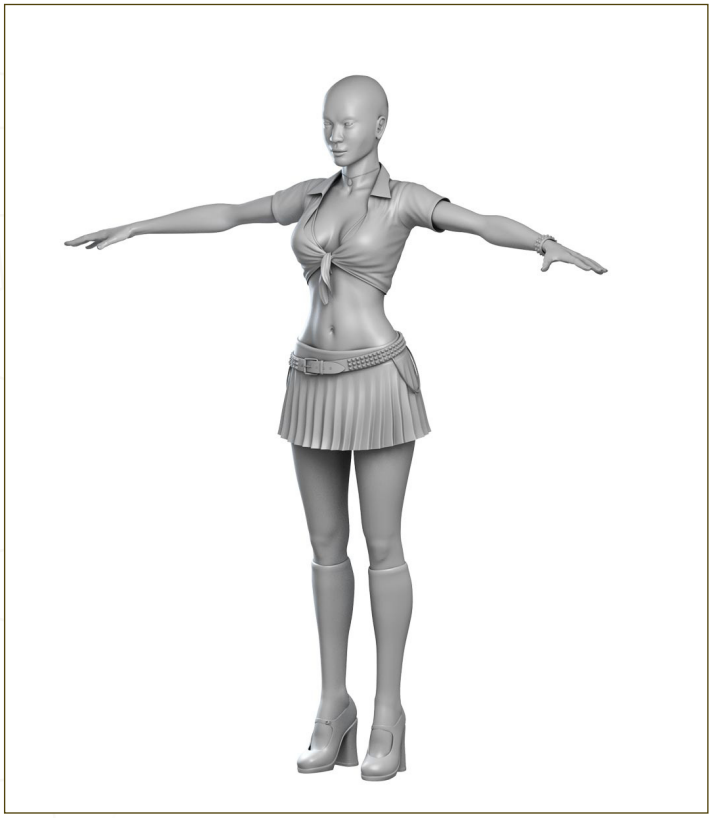


At the moment you're employed as a 3D Animator/Modeller for Ark VFX. Could you tell us what your standard day is like and what sort of projects you're currently working on?

Ark is a very small and very unique company. We are all really good mates as we've all worked together for a long time now. Most of us come from Particle Systems, which later became Argonaut Games, including the four directors. Although technically I have 4 bosses, we have all worked together on equal footing before as artists for a larger company, and as such it's a very laid back atmosphere where everyone's friends and there's not much we don't feel we can't say to each other. Generally the day begins with a cup of tea in the kitchen and a game of 'who can put the most disgusting thing in someone else's tea without them noticing'. There's nothing quite like mouth full of salty tea to wake you up in the morning! Then it's back to the office for some actual work.

We tend to work on a wide variety of projects ranging from 30 minute FMV sequences to television adverts to music videos to magazine covers, so I get to vary my work a lot. Primarily





I like to do character work, so if it ever comes up generally I get involved in some way. At the moment we're working on a television advert for the Singapore navy, which involves lots of skyscrapers floating out to sea and having a huge naval battle. I started the project modelling buildings and set pieces, then I did a bit of scene set-up and lighting, some concept work for the clients, and now I'm modelling the main character. As you can see we really don't like to keep people tied down to one job for too long, which gives us a chance to develop our skill sets and allows for a much more adaptable working environment, which I feel is extremely important in a small company as it does away with a work flow bottle neck where one group of artists might be waiting for another group to finish their specific job - instead everyone can have a go at everything!







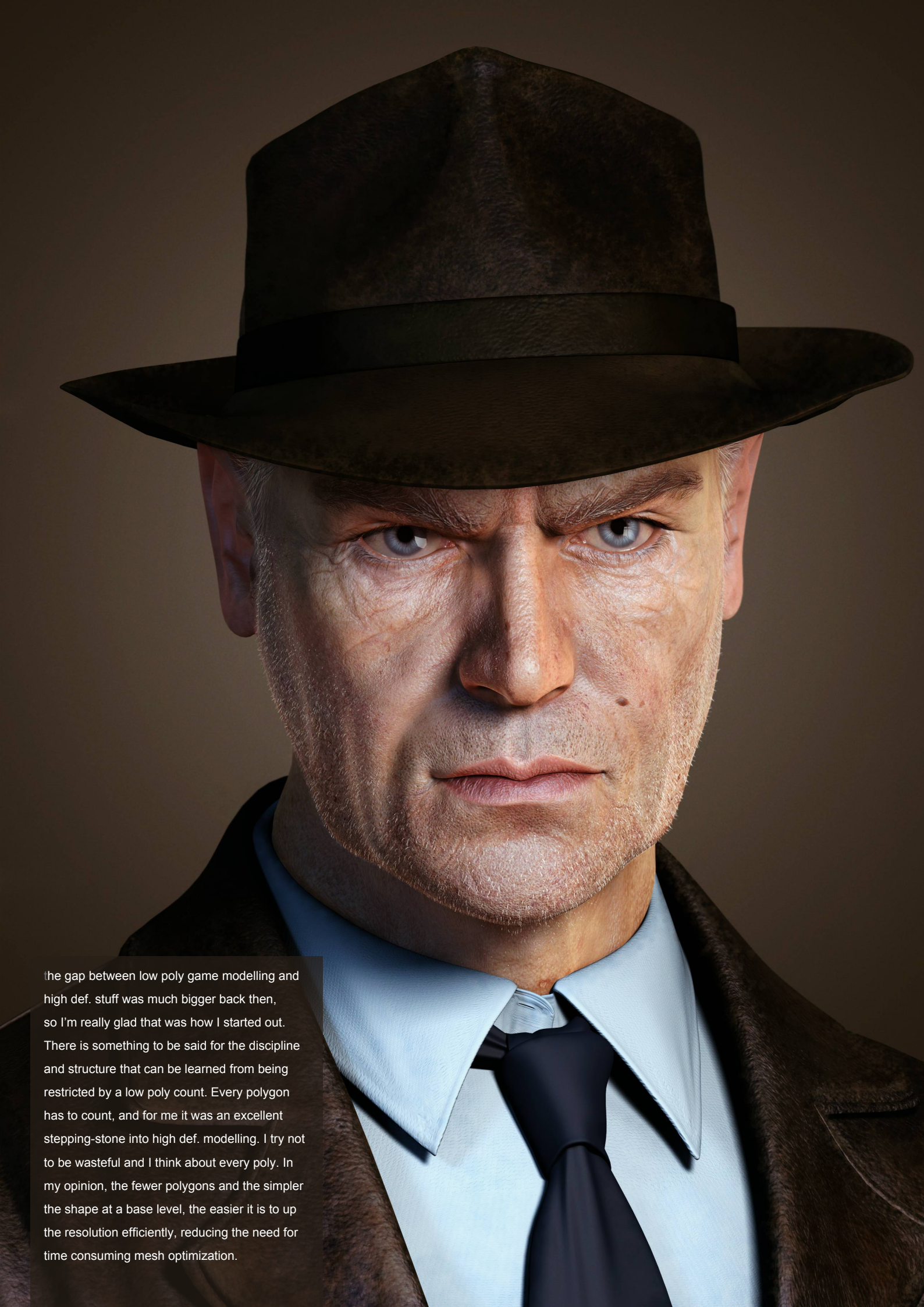


With being a team of friends and having worked together in the past, do you find it easy to give and to receive criticism from the other members of the team?

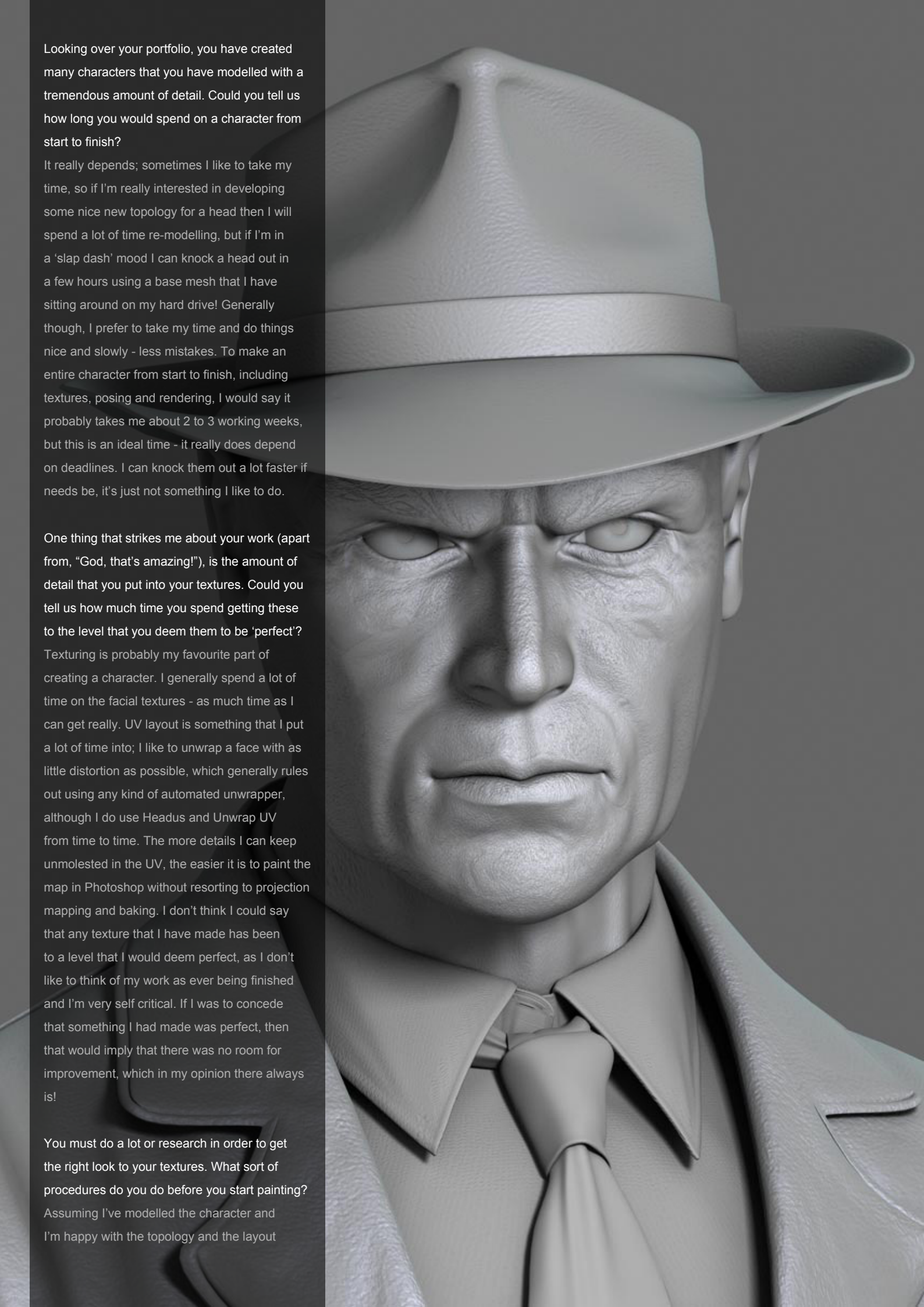
Absolutely. Being such a small company, it's essential to the way we work; it's a very friendly atmosphere and no-one minds a bit of constructive criticism, although, as I'm sure anyone who works in a creative environment will testify, sometimes it doesn't go down as well as it should...

Do you prefer this sort of work, compared to the days when you worked at Argonaut?

Well, the work I did at Argonaut was mostly low poly game modelling for a game called "Power Drome", which did fantastically badly and sold so few copies I doubt anyone reading this article has even heard of it! Although,



the gap between low poly game modelling and high def. stuff was much bigger back then, so I'm really glad that was how I started out. There is something to be said for the discipline and structure that can be learned from being restricted by a low poly count. Every polygon has to count, and for me it was an excellent stepping-stone into high def. modelling. I try not to be wasteful and I think about every poly. In my opinion, the fewer polygons and the simpler the shape at a base level, the easier it is to up the resolution efficiently, reducing the need for time consuming mesh optimization.



Looking over your portfolio, you have created many characters that you have modelled with a tremendous amount of detail. Could you tell us how long you would spend on a character from start to finish?

It really depends; sometimes I like to take my time, so if I'm really interested in developing some nice new topology for a head then I will spend a lot of time re-modelling, but if I'm in a 'slap dash' mood I can knock a head out in a few hours using a base mesh that I have sitting around on my hard drive! Generally though, I prefer to take my time and do things nice and slowly - less mistakes. To make an entire character from start to finish, including textures, posing and rendering, I would say it probably takes me about 2 to 3 working weeks, but this is an ideal time - it really does depend on deadlines. I can knock them out a lot faster if needs be, it's just not something I like to do.

One thing that strikes me about your work (apart from, "God, that's amazing!"), is the amount of detail that you put into your textures. Could you tell us how much time you spend getting these to the level that you deem them to be 'perfect'?

Texturing is probably my favourite part of creating a character. I generally spend a lot of time on the facial textures - as much time as I can get really. UV layout is something that I put a lot of time into; I like to unwrap a face with as little distortion as possible, which generally rules out using any kind of automated unwrapper, although I do use Headus and Unwrap UV from time to time. The more details I can keep unmolested in the UV, the easier it is to paint the map in Photoshop without resorting to projection mapping and baking. I don't think I could say that any texture that I have made has been to a level that I would deem perfect, as I don't like to think of my work as ever being finished and I'm very self critical. If I was to concede that something I had made was perfect, then that would imply that there was no room for improvement, which in my opinion there always is!

You must do a lot or research in order to get the right look to your textures. What sort of procedures do you do before you start painting?

Assuming I've modelled the character and I'm happy with the topology and the layout

of the UV map, I start by rendering out front, side, back and top views of the phong shaded mesh with a very long lens camera. I can then load these into Photoshop and use them as a template onto which I can paint my textures. As I'm sure you can tell from a lot of my renders, I like to use photographic reference - in my opinion it's the only way to quickly get realistic results! I'm a great believer in 3d.sk and also have a large selection of very high-resolution facial photography, which I use to cut and paste onto the rendered views, slowly building up the base skin texture. A good tip to get a nice base texture is to use a single photograph, paste it over the render and use Photoshop's Liquify tool to soft deform the features so that they roughly match that of the mesh. Once I've roughly textured all views in Photoshop I project them back onto the mesh in LightWave and use Microwave to bake them into the UV map. This gives me a very rough unwrapped base texture. At this point I like to spend a lot of time adding details and touching up the skin, evening out tones and removing shadows. Only when the base skin texture is complete do I go in and paint the details, like wrinkles, moles, fatty deposits, scars and so on. I also find it useful





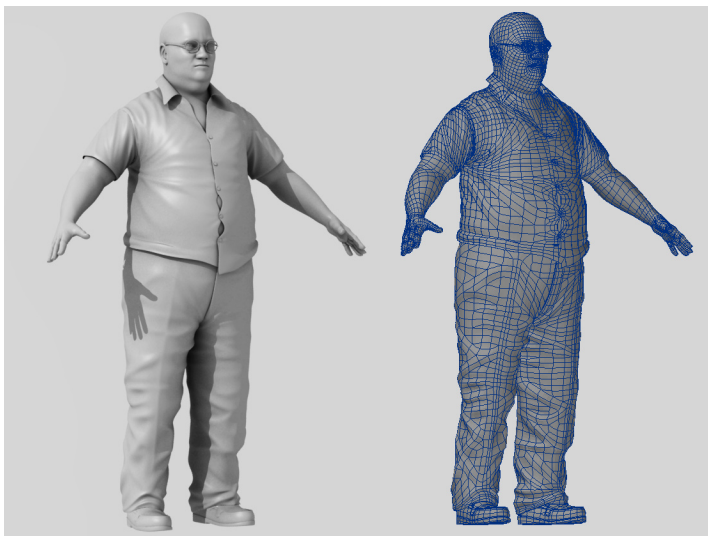


to bake out an unwrapped global illumination texture - it's handy to have as a reference when painting in Photoshop as it allows you to easily pick out the major features of the face much more accurately than using a simple unwrapped wire frame.



With the likes of programs such as ZBrush and Mudbox out today, how to you feel about the impact that these programs have had in the industry, and have you ever been tempted to make the switch from LightWave?

This is a topic that comes up a lot at work; I'm a big fan of ZBrush and Mudbox and I've seen some amazing sculptures, by the likes of Kolby Jukes and Zac Petroc. However, they seem to be suffering severely from what I like to call the "lens flair effect"; i.e. as soon as every man and his dog realised that Photoshop could make sparkly bright lights that vaguely resembled the sun when viewed through a camera subtlety went out the window, very soon every student project and amateur film was bursting with the things. They were seen as a 'quick fix', and instead of enhancing the scene they were used to mask poor quality work. This is kind of how I view a lot of ZBrush projects at the moment; I see hundreds of orcs or indecipherably complicated aliens, all with huge frowning brows and folds of fat bulging out of every crevice. Don't get me wrong, orc modelling is an art form and I've seen some fantastic orcs and there really is no better way to make one than with



ZBrush or Mudbox, but unlike a lot of people would have you believe, the CG industry doesn't revolve around being a trendy ZBrush orc modeller. I think this kind of attitude puts a lot of pressure on amateur modellers to skip the basic stuff and delve head first into complex sculpting techniques. A good character modeller should understand anatomy and proportions first and foremost. A healthy understanding of topology and edge loops is also essential for an artist working professionally, especially in the games industry. ZBrush should be used as a tool to enhance a character to add details that wouldn't normally be attainable in any other way. OK, rant over, sorry about that! I wouldn't say that I would ever switch from LightWave to ZBrush because I'm always going to use LightWave to





design characters, to model the base meshes, rough out shapes and design the topology. Only after that would I take a character in ZBrush to detail it.

If you could sum up your style of work into one sentence, what would it be?

I would like to say “photorealistic character work”, but they’re not and they probably never will be...

Throughout an artist’s career, they will always look at artwork by there favourite artists, whether for research or for inspiration. So who do you find *your* inspiration from?

I have a huge reference drive: I tend to trawl through the forums downloading anything and everything that takes my fancy. My favourite artists are Zac Petroc, Francisco Cortina, Bay Raitt, Linda Bergkvist, Craig Mullins and Kolby Jukes.

Well it has been a pleasure talking with you and getting a little glimpse in to the life of James Busby. One last question before we wrap things up: what has been to most influential piece of advice that you have been given in your art career?

Thanks, it’s been a pleasure for me, too. Hmm, I’m not sure as I’ve only really been working for about 5 years now and I feel like I’ve learned so much and have been given so much great advice that it’s hard for me to pin down one specific thing... I guess I kind of live by the fairly depressing philosophy that you should never be happy with your work; there’s always room for improvement and the day you sit down and look at a piece and say “that’s perfect”, is the day you stop trying. It’s not really advice but its what keeps me going!

JAMES BUSBY

For more work by this artist please visit:
http://cardboarddog.cgsociety.org/gallery
Or contact them at:
jabusby@hotmail.com
Interviewed by: Chris Perrins



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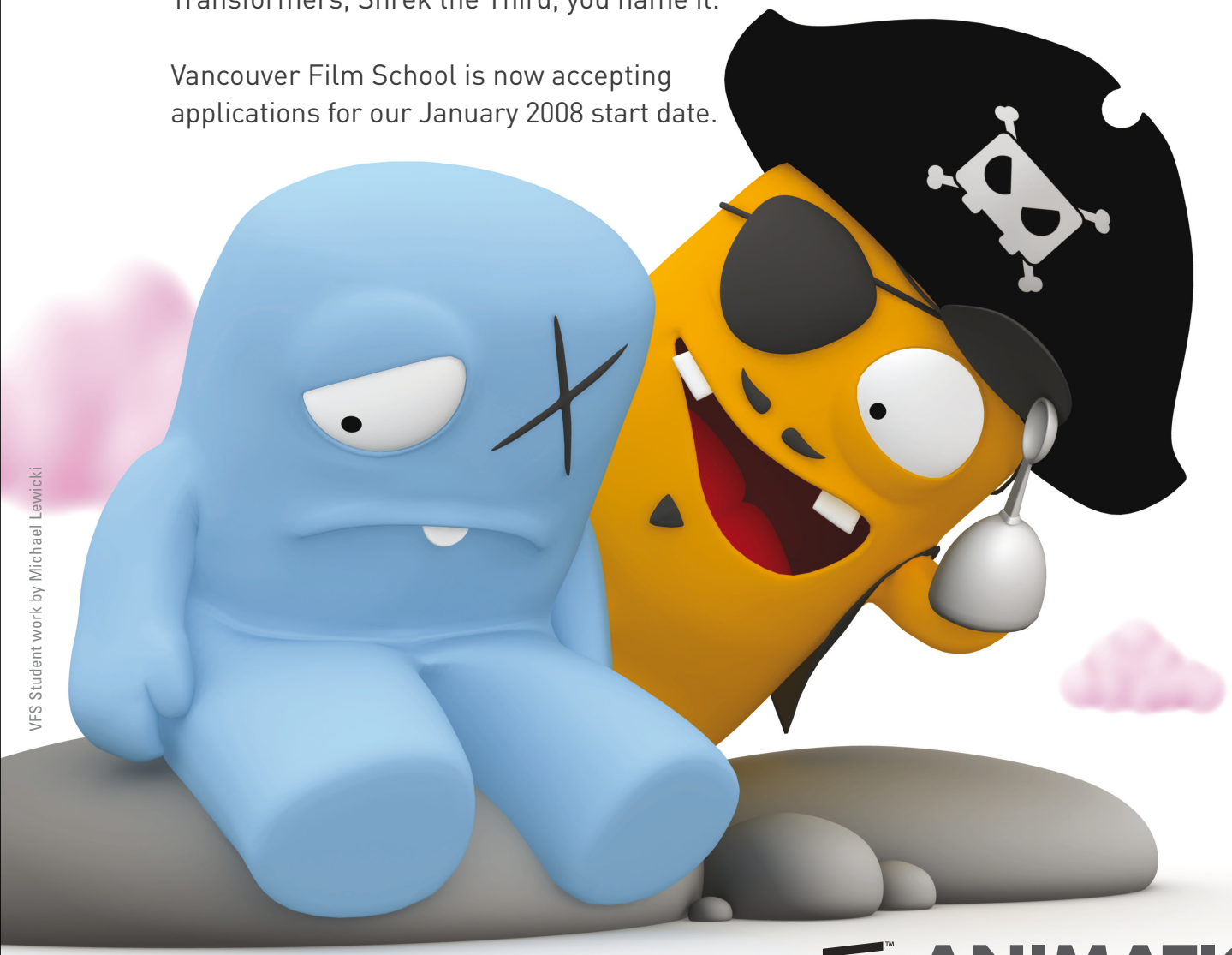
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SOFA (Spirit of Fantastic Animation) Studio is really going places - and fast! With a current team of over 70 artists working on four TV series and a feature film, we find out more about their team dynamics, production pipeline, and future plans...

SOFA STUDIO



Hi Vick, SOFA Studio looks like one big creative place! Where are you based? How did it all start? How may employees have you grown to?

SOFA (which stands for Spirit of Fantastic Animation) Studio is an animation house based in Taipei, Taiwan. Back in 2002, we started out as two small-sized studios working together on commercial films and visual effects. In 2004, the partnership was re-structured, and the two studios merged to become one large animation studio named SOFA Studio, whose purpose shifted towards original content creations. The company has grown to about a total of 100 employees.



Congratulations, it sounds like you have become very successful in just a short time. How is the current animation industry as a whole in Taiwan? Do you have staff coming to work for you from other countries? Do you recommend students to follow a career of animation in Taiwan?

Taiwan has been long recognised for its execution of good quality animation. As a whole, the current animation industry in Taiwan is quickly expanding. In the past, animation was done as work-for-hire in 2D, but in recent years there have been one or two large studios doing 3D animation as work-for-hire. Starting five years ago, government funding and supportive programs in the animation industry have encouraged small studios to develop original projects (prototype). Small studios are now developing not only visual effects but also original content. Currently, the animation market in Taiwan is not very large; so many animation studios are seeking co-production opportunities. We have many international talents coming



from US, Europe, Japan, and other parts of the world. We strongly recommend students to follow a career of animation in Taiwan; thus many universities here teach courses in animation.

What are the main projects you are currently working on? Can you tell us who they are aimed at?

We are currently working on several original TV series and a feature film, which are all being developed in-house. They include:

TV Series:

MUMUHUG: 4 min, 20 sec x 52 episodes targeted at 3-8 year olds; the series has been distributed to more than 35 countries.

NELLY & CAESAR (international co-production project involving France, Belgium, Taiwan and Canada): 7 min x 52 episodes targeted at pre-school kids

CHOCCY: Targeted at 6-10 year olds; currently in pre-production

MR. G: Targeted at 8-12 year olds; currently in development

Feature film:

MONSTER COINS: 90 min comedy/action film targeted at families; currently in pre-production



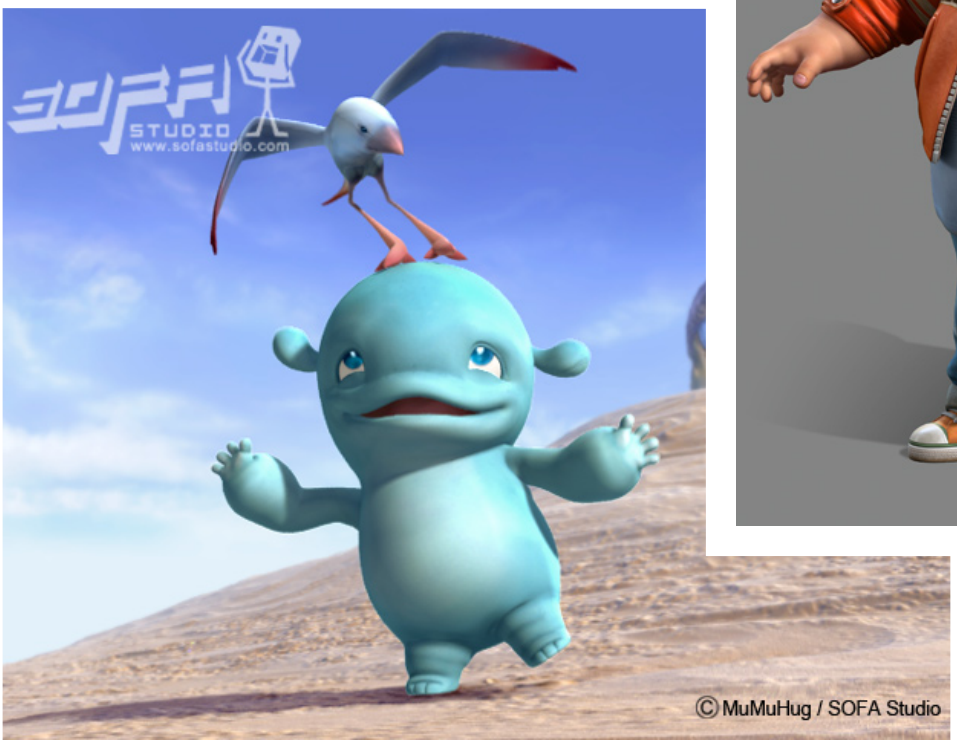
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STUDIO
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You must be one very busy studio! With regards to the feature film, what is the time frame you are estimating for this project for the various stages to completion, and how many staff will you have working on this?

We are looking at approximately a three year time frame to complete the film. This is our first feature project, so we would like to spend more time in pre-production to iron out all of the details. At the same time, we are seeking other international partners to work on our feature film. Currently, 30 artists are working on MONSTER COINS pre-production, and we expect to triple the current size when production starts.







How does the production work in your studio, what staff structure and what separate departments do you have?

At SOFA Studio there are 3 main stages of production: pre-production, production, and post-production. We have about 70+ artists which make up the Content Development and CGI 3D Animation teams. Project Management, Business Development, Finance, Legal and HR/Administration departments are comprised of about 20 employees.

Do you still do any traditional hand drawn 2D animation? Or is all 2D digital just like 3D? Do you see this changing in the future?

We don't do hand drawn traditional animation, but we have many talents who come from traditional animation backgrounds. We don't restrict ourselves only to 3D, so the final look of the animation could be a 2D look. For example, one of our projects involves the application of 3D technology in a 2D look animation. Yes, we see this changing in the future.

Can you tell us a bit about the software you use?

We use Maya 7.0 for animation, Render Man for rendering, Digital Fusion for compositing, Photoshop and Premiere for storyboarding.

Do any of the artists have any particular tools or plug-ins for there software that they find very valuable?

We have a programming team specialised in developing tools for artists in order to enhance the efficiency of the process. This helps us to (1) make the production pipeline more efficient and (2) help the artists streamline their work process.







What are SOFA Studio's future plans and future projects?

SOFA Studio continues to seek worldwide co-production partners and distribution for animation projects. They plan to connect with international partners to collaborate on potential co-production, co-distribution, licensing and merchandising opportunities.

Well, I wish you the very best Vick with your future plans, expansions and successes. We appreciate how busy the CEO of a large animation studio must be and so I thank you for taking the time to talk with us.

Thank you very much!

VICK WANG SOFA STUDIO:

For more work by this artist please visit:

http://www.sofastudio.com

Or contact them at:

business@sofastudio.com

Interviewed by: Tom Greenway


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"It was during the time we were working with Disney on 'The Lion King', that I was introduced to an up coming Pixar release, called 'Toy Story...'"

From creating consumer products for the likes of Disney, Warner Brothers and Jim Henson Productions, to name just a few, to now running a successful Architectural Visualisation company, we chat with Darrell Raliff from **Pacificom Multimedia** about his company and his work...



Pacificom MULTIMEDIA

an interview with Darrell Ratliff

Pacificom MULTIMEDIA





Hi, thanks for talking to us. We don't very often talk directly to Presidents! How did you get Pacificom Multimedia started?

The company was started at Virginia Tech. after relocating there from California, in 2000. My former company had worked with Disney, Warner Brothers, Jim Henson Productions and other studios, creating consumer products. It was during the time we were working with Disney on 'The Lion King', that I was introduced to an up coming Pixar release, called 'Toy Story'. I tried to get the opportunity to produce consumer product lines for the film and was told by Disney that they felt the film would not do well at box office and therefore they were not interested in us pursuing it. At the time, I had about 100 employees and went back to the office thinking of nothing but this new 3D world, and trying to figure out how I could do something with it to turn it into a business...



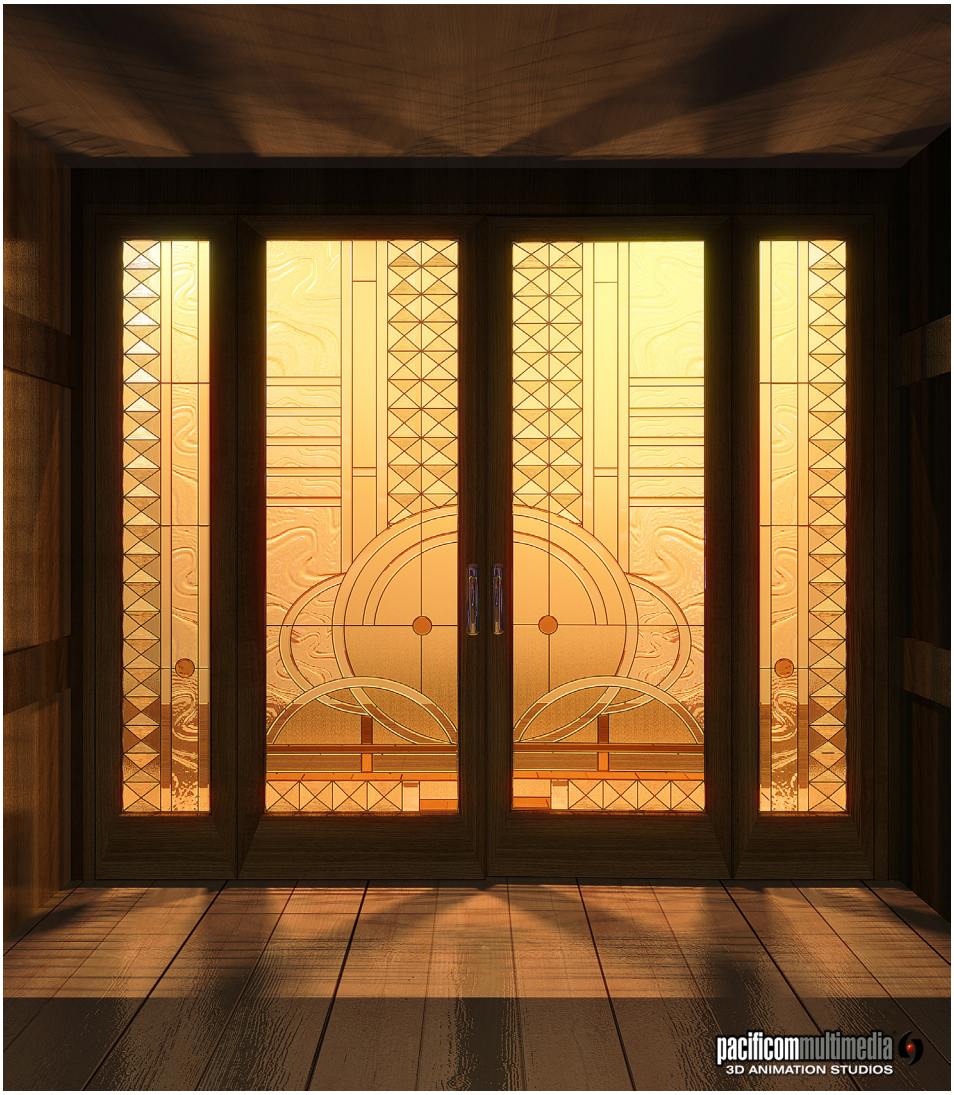


Years later at VA Tech. we were designing marketing programs for Log Home magazines, and at that point the potential market for the Architectural Visualisation field was easy to see. There was some very crude work being done in that field, at the time. I refused to release anything with our name on it until we felt we were one of the best at it. My first staff came from the gaming industry and they were used to low-poly, unrealistic design and not photo-realistic models with massive data. In 2002, I moved back to California, keeping an office open in VA Tech. It was there that I began putting together the team we still have today.

And how you would you best describe what Pacificom does?

Pacificom has its current core business in the architectural field, but we also do broadcast work and product design work for advertising agency





clients. Most of our staff, of 18 artists, come from a television background. It was actually a learning curve for them to get into the arch viz mind set.

I remember the early days of the coined phrase "multimedia"; it seems to have taken a back seat to other phrases and more specialized companies, how does being a part of the 'multimedia' area give you an advantage?

When the company started, we were an interactive program development company. We created a lot of interactive CDs for clients, like Architectural Digest. As we got better at 3D, and eventually focused primarily on that field, the name had been with us for so many years that it was hard to change it. We felt that we had a brand.

Later however, we began to take the 3D work that we did for clients and placed them into interactive sales solutions. We recently completed a project for Armstrong Flooring, where they can showcase many ceiling options in an environment with the click of a button. We



created about 30 environments for them, from airports to grocery stores. Here's an example: **http://www.pacificommultimedia.com/arm_grocery02.html**

From your website and studio photos, I get the impression of an extremely smooth-running and organised workflow. Is this the case?

We are in pursuit of a smooth-running studio, but it's an ongoing effort. Just when you think

you've seen it all, someone hits you with a new problem. Our biggest, single problem is that our clients rarely ever know what they want. The larger the project, the more information we need. Ultimately, we find they simply don't have it; they think they have everything, but it's rarely the case. When they don't, they give us 'creative freedom'. And creative freedom lasts until they don't like what you do and suddenly the "freedom" is gone.



The company has worked on a lot of architectural projects, and has also branched into areas which utilise architectural renderings, such as interactive visualisation. Are you pretty much open to any type of work?

We are open to most types of work. Fortunately, we've been able to turn away work that we felt was not in our best interest as a company to do. In many cases, we've even volunteered our services for church builders and other non-profit projects. Ultimately we would want to be more involved in film special effects. As with any young company, cash means everything,





and whilst you may not be where you want to be you still have bills to pay. So if the work is profitable, we look at it. Unfortunately, many people in our field are turning to China and India for cheap labour. All this does is turn our industry into a Wal-Mart. Then suddenly there is no profit to be made and everyone is left looking for a new career, or it's filled with fly-by-night firms just out for a quick buck.

We hope at the end of the day that we have given our clients something that is beneficial to making a proper decision. By properly exposing what a building, mall or residential development will ultimately look like, we hope that city planners will use them to make the correct decisions regarding what you and I will have to look at and live with in the future. By giving them this visual tool, we think we can help to make the world at least a better-looking place to live.



Are you architects who learnt 3D, or is it the other way around?

We are all artists. Most of us here sculpt, paint, play music, surf, snowboard, motocross and live life to its fullest. 3D is simply another art form. We've had to learn the architectural side of the business the hard way. In reality, the architects are the ones who create the ideas. We just execute the ideas and turn them into reality. Everything we do here is a collaboration of many talents. No one, single person, especially me, can take credit for the work we do. I'm blessed to be surrounded by so many talented people.

Darrell Ratliff

For more work by this artist please visit:

www.pacificommultimedia.com

Or contact them at:

Darrell@pacificommultimedia.com

Interviewed by: Ben Barnes



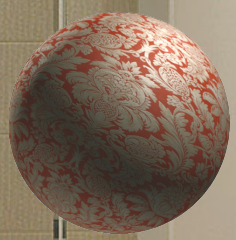
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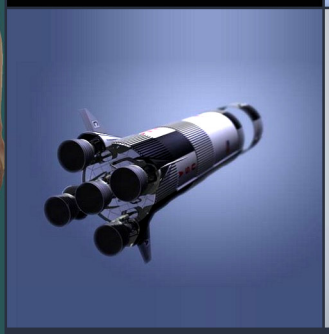
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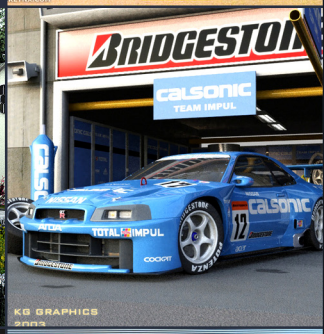



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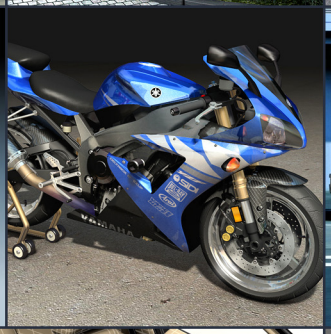
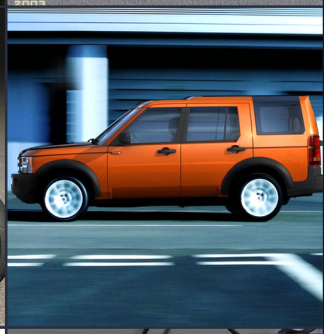
3d02.com. Commonly known as a high quality 3d model store, one of the premier stores of digital assets offering ready to use CG 3d models, and an open platform allowing artists to publish and sell their 3d models online

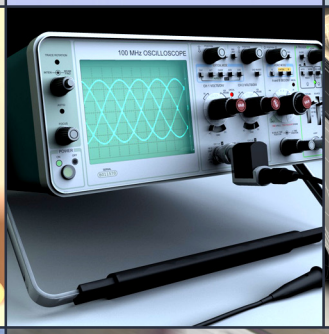




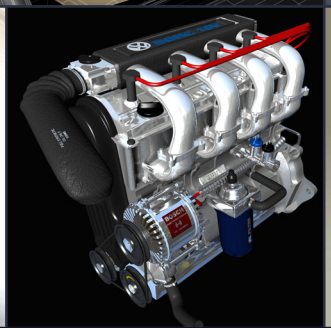












"From the beginning, the intention was to have the viewer think this was an 'old-fashioned' diorama, only to be surprised by the level of detail and emotion in each figure..."

HALO 3

METHOD CREATES A WHOLE NEW HALO 3 EXPERIENCE

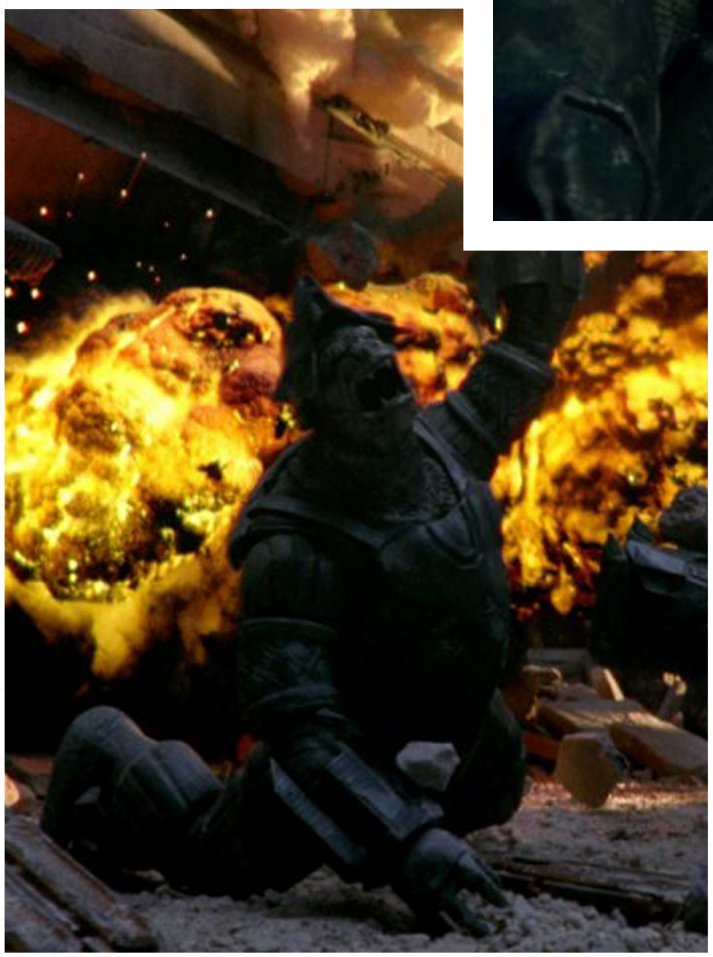
Who would have thought creating dioramas would have been so much fun?! Method Studios talks about the recent collaboration with director Rupert Sanders and Stan Winston, via T.A.G/ McCann Worldgroup, to create this truly unique TV/film spot for Halo 3...

HALO 3

Method Creates A Whole New Halo 3 Experience

LOS ANGELES, CA – Method Studios (www.methodstudios.com) recently joined the marketing blitzkrieg surrounding the release of Microsoft's Halo 3, collaborating on a remarkable new set of spots that bring a whole new 'look' to one of the world's most popular combat games via T.A.G/Mc Cann Worldgroup. Directed by MJZ's Rupert Sanders, Method collaborated very closely with the production company on a massive diorama, populated by more than 1,000 figures sculpted by master modeller Stan Winston. (The spot aired September 16th, 2007.)



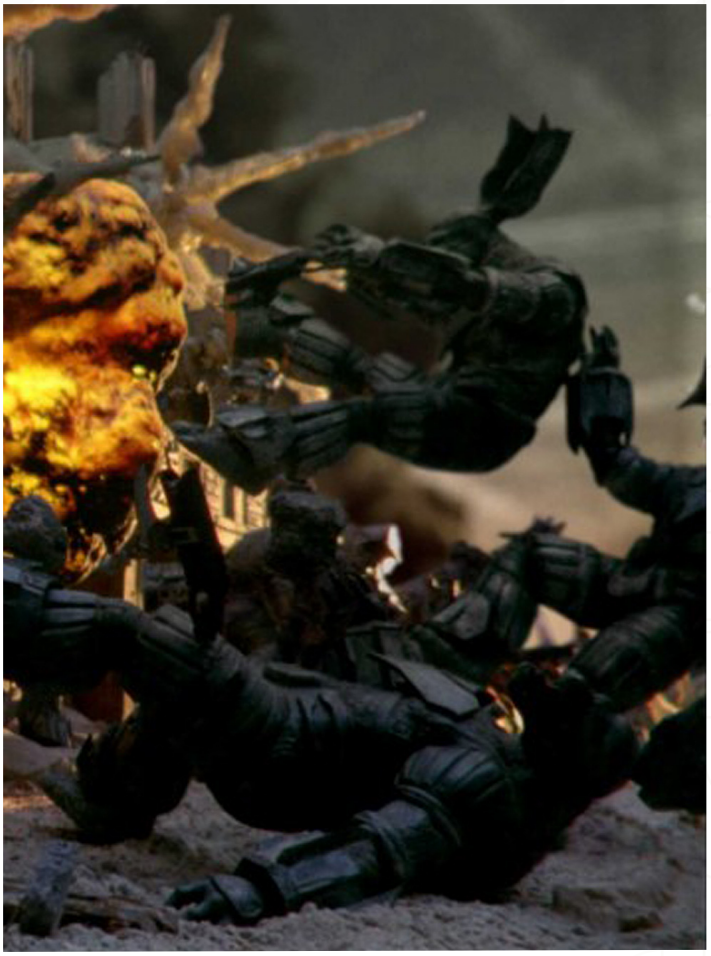


The flagship spot, "Believe," is a surprisingly graceful, almost dream-like ground-level tour of a battlefield frozen in a moment of a time – a "memory museum" diorama depicting a brutal battle. These are not CGI animations or screen shots of the game; this is a real, hand-sculpted diorama, but as the camera moves through the suspended carnage, we see an eerie level of detail: explosions caught in mid-detonation, weapons firing into flailing bodies, faces frozen in expressions of fear, determination and agony. The effect is emotional and almost hypnotic, successfully depicting the truly immersive world that is Halo's trademark experience.

"Microsoft and T.A.G/McCann Worldgroup came to us with the concept of the diorama," said CG Creative Director Laurent Ledru, "and Rupert moved the idea along. He wanted to do something very moody, to try and get emotion out of these figures, where typically you wouldn't feel too much emotion at all. The thought was to do something epic, very cinematic, and the fact that nothing moves, except at the very end, makes it even more powerful. It's really not what you expect from this kind of advertising."

How They Did It

Rupert and VFX Supervisor Cedric Nicholas knew that the key to making this project work would be in the planning and previsualization of the complete shoot, from the design of the diorama through the final shot sequence. "Technically," Cedric said, "it was pretty straightforward, but we had to think about everything in advance of the shoot." So the Method team worked with Halon to previsualize the entire spot in CG.



"We built a complete CG environment in 3D before the real thing was started," Laurent said. "We decided where to put the streets, how many buildings and figurines and tanks and explosions to have. By the time we locked it down, we knew how many figurines we needed, what kind of poses – everything that would be needed to go into the fabrication phase."

The size of the diorama itself became a major issue. Normally, constructions like this are the size of a large tabletop or sandtable, and the figures are no more than an inch tall. But that small scale would have limited the amount of detail that could be achieved. "It couldn't be done with one-inch figures," Cedric Nicholas said. "Instead an oversized diorama was created, 30 feet long and 40 feet wide, and the figures were eight inches tall." New Deal took on the task of building the set and it was there the diorama was shot in a room that was 75 feet long and 60 feet wide. Ultimately the set and motion control rigs completely filled the space, with barely enough room left for the crew.





"From the beginning, the intention was to have the viewer think this was an 'old-fashioned' diorama, only to be surprised by the level of detail and emotion in each figure," said Laurent. "It was about scaling. Rupert wanted to have the feeling the figures were one inch tall but overly precise, so the diorama was shot with a maximum depth of field, so you have the feeling that the figures are much smaller than they really are. Instead of thinking you're looking at a 40 foot diorama, you're looking at a 10-foot one."

The figures themselves needed equally close attention, so master modeller and puppeteer Stan Winston and his artists hand-built each of the diorama's 700 to 1,000 figures. To add an even greater level of realism, Winston's team used scans of individual human features for each face. "All the marines' faces are scanned from real people," Laurent said. "You're going to see Rupert Sanders' face many times in the spot, as well as Agency Creative Director Scott Duchon, MJZ Producer Laurie Bocaccio, and Production Supervisor Alan Scott. To add even greater on-set flexibility, Winston's team fully or partially articulated many of the foreground and midground figures.

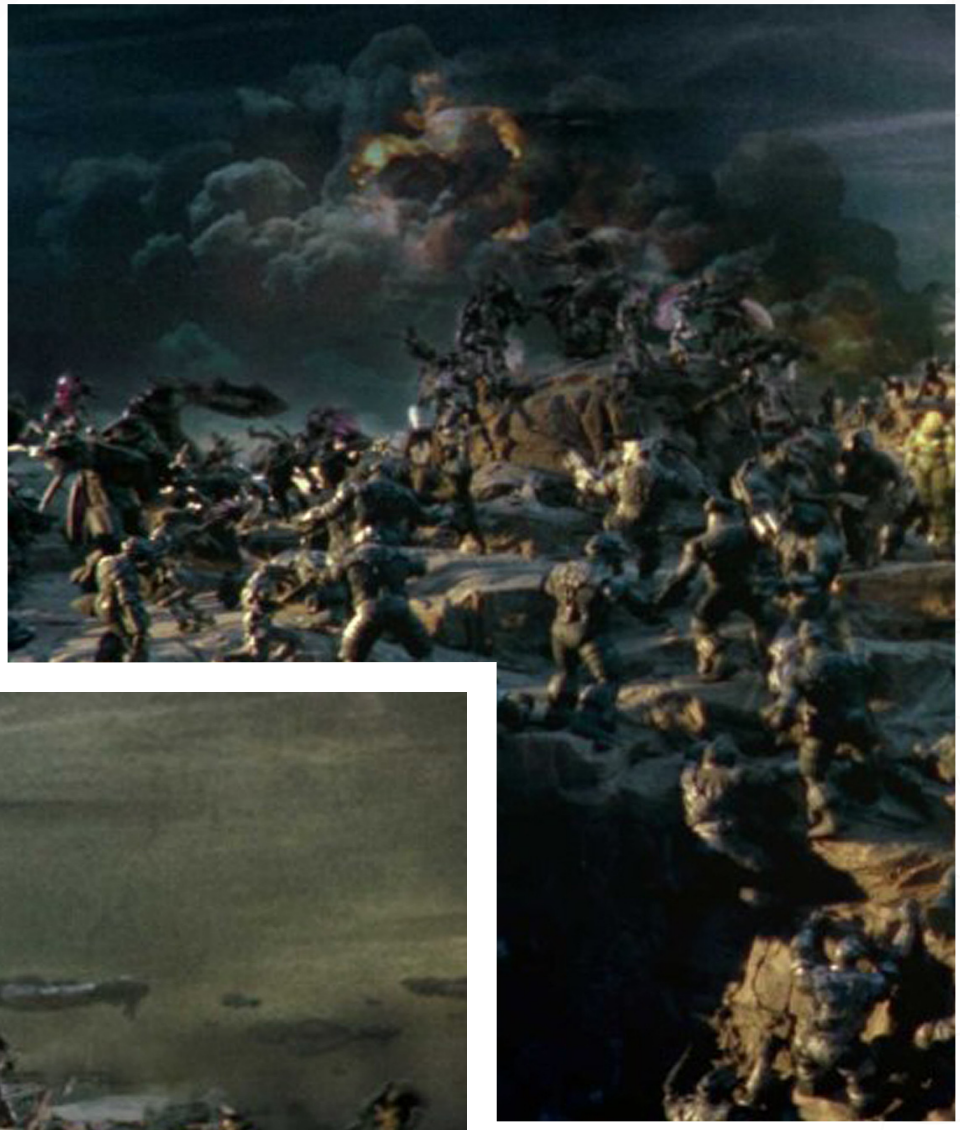
The final, carefully planned shoot involved massive bluescreens that went all the way to the ceiling, the huge diorama itself, and two separate motion-control rigs – an eighteen-foot rig on one side, and a 12-foot rig on the other. The shoot itself was done extremely slowly – 1 fps -- and with painstaking attention to detail. Some of the long zoom/dolly shots that appear in the spot actually took more than 30 minutes each to complete.

Ultimately, the crew laid off 48 different shots in a shoot that lasted three days; the entire project was completed in less than three weeks. "The only way to make this work is to be 90% ready when you actually shoot it," Laurent said. "If you do less on the prep and more on the post, that's when you tank."

In the final analysis, there is a small amount of CG in the final spot. "We have a couple of the Marines with real eyes, to give them a little bit more depth," Laurent said. A few reflective light effects on helmets and visors and a CG grenade were added in post as well, and the soldier's head that appears at the very end of the spot was animated, to give it a more realistic movement. But the dreamy impact of the spot overall is achieved through the hyper-realistic look of the miniatures and the diorama itself.

As far as the Method team was concerned, the real triumph of “Believe” was not the use of any new technology, but the flawless combination of many techniques and talents. “What’s unique in this project is what has been used to make it happen. All are techniques that are known and have been used on many projects, but we drew all those things together. Apparently that has never been done before,” Laurent said.

Microsoft was very pleased with the final re-imagining of the Halo world – so much so that they packed up the diorama and took it home. “It’s been cut into parts and transported,” Laurent Ledru said. “I believe they plan to display it – maybe not entirely, but in bits and pieces.”





About Method

Based in Santa Monica, California, Method is a visual effects artists’ studio specialised in the production of digital imagery for commercials, feature films and music videos.

More information may be found at:
www.methodstudios.com

Method - Creates A Whole New Halo 3 Experience

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"In my free time I spend a lot of time with my girlfriend, and I also go out with my friends for a pint or 2 (or 3 or 4, or until someone has to carry me home)."

Taking Time Out

This month, we have asked 3D artists from a variety of backgrounds and locations around the world:

How do you take time out from the world of CG/Art?

Here's what they said...

Taking Time Out


image by André Holzmeister

Ali Ismail:

Digital Artist, Lucasfilm Animation, Singapore

"Time Out! What time out?! No, I'm just kidding. The usual stuff I guess is going out with friends, going to the movies, and if I had a few days free then visiting a new place, but most importantly getting away from the computer!"

Anders Lejczak:

Project Manager, Framfab, Malmoe, Sweden

"For me, it's the other way around: I have to find time when I can go *into* the world of CG. During certain periods this can be almost impossible because of my day job."

André Holzmeister:

"Well I believe for us that, working in this business, we have "productive idle time", because a movie is always reference; cartoons are reference; TV is reference; comics are reference; video games are reference; a beautiful sunset is reference; driving and watching people walking or running in the streets are reference. I believe I am never unplugged. But I do love movies and video games."

Andre Kutscherauer:

3D Designer, Studio Messslinger Gmbh

Munich, Germany

"At the moment I get no 'time out'."

Anna Celarek:

Student, Vienna

"I study, sleep, eat and go out."

Bogdan:

"I forget about computers and cell phones; I take my tent and my sleeping bag, and I usually travel to remote locations - high up on the mountains, with my wife and our friends. There we spend most of our time climbing, sitting around the fire if the weather is good, reading, playing cards, or sleeping if it's raining. Sometimes we even spend one night with the shepherds and their very bad dogs! They also have good cheese straight from the source, and we drink "Palinca", which is a strong alcoholic traditional drink which burns like hell, so the deal is fair enough. This way I have the chance to see the shepherds "at work" in the middle of the night, chasing wolves while we are there! Pretty scary, isn't it? When I'm not spending time on the mountains though, I'm visiting historical places or museums around Europe."


image by Bogdan

Cesar Alejandro Montero Orozco:

CG Artist & Freelancer, Digi-Guys London

UK & Mexico

"I normally play role-playing games or do things that are related to stories. It's hard to keep myself away from doing some type of art, or helping people."

Dana Dorian:

"I have two young children who need my attention."

Daniel Vijoi:

"I also love things other than art, like travelling, movies and spending time with my family. But usually it's hard to take time out from art."



image by Stepan (O)ne Grakov:



image by Eric Provan

David Revoy:

"Mostly I have my wife at home to talk to; I also watch TV documentaries, I like go to the market and cook, and I enjoy travelling within my region. I'm a classic person in my hobbies - a bit reserved and calm. I like to observe a lot and try to understand the things of life."

Eric Provan:

3D Modeller, Sony Pictures Imageworks

LA, USA

"I began learning the guitar a few years ago about the same time that I started learning 3D. It's been my favourite "rendering tool". I also enjoy fishing, snowboarding and reading books - picture books, of course!"

Eugenio Garcia:

3D Illustrator & Animator, GrupoW

Saltillo, México

"I play the guitar, I play soccer, I love to watch movies, I enjoy a good dinner, and I listen to music."

Gustavo Groppo:

General 3D Artist, Mamute Mídia

São Paulo, Brazil

"I usually keep in touch with my second hobby, which is music. I also spend time with my family,

my girlfriend and friends at home, as well as travelling and practising sports."


image by Michael Seidl

Hasraf Dulull:

Visual Effects Artist, The Moving Picture Company, London, Soho

"I don't! But if I do then it's down to my girlfriend who makes sure we are always out of the house at the weekends!"

Jure Zagoricnik:

Web Developer & 3D Freelancer, Hal interactive & 3D Grafika, Kamnik, Slovenia

"I try to have as much fun as possible!"

Kevin (Tycane) Beckers:

3D Developer & Designer, INDG, Amsterdam

"In my free time I spend a lot of time with my girlfriend, and I also go out with my friends for a pint or 2 (or 3 or 4, or until someone has to carry me home). I also like gaming, although I don't really 'game' as much as I used to. My normal gaming sessions usually get interrupted by me seeing something in the game, switching off the game, opening Max, and then trying to create something like what I saw in the game."


image by Sean Dunderdale:

Liam Kemp:

"That would be a luxury at the moment."

Matt Westrup:

"It's very difficult to switch off completely, but it would be walking on the nearby beach with my wife."

Michael Seidl:

3D Artist, Modelling & Rendering, www.michaelseidl.com, Vienna, Austria

"I always try to keep my life well balanced. The best time out for me is to meet some friends, do a lot of sports and sail-flying. It is very important for me to get back some energy, so that I can work most efficiently."

Neil MacCormack:

Freelance 3D Artist, Bearfootfilms Geneva, Switzerland

"Snowboarding in the winter; football and sports in the summer."

Nicolas Collings:

"I like to be with my family and have fun with all my friends."

Pedro Mendez:

"I just work with it!"

Pete Sussi:

"Time away? What's that?! I suppose spending time with friends and my wonderfully understanding wife."

Peter Sanitra:

3D Artist, ImagesFX, Prague, Czech Republic

"I go out with my friends."

Petra Stefankova:

"My life is all about art, so it's present 24 hours a day, but everything that happens is then reflected. I observe things and situations on a different level; my observation is often very deep and detailed. I love travelling, learning about different cultures, nationalities and systems, and I am also an experienced hunter and a great dreamer."

Rich Diamant:

"I spend time with my beautiful soon-to-be wife and my little puppy. That's a full time job!"

Sean Dunderdale:

"Going to the pub, watching/playing football, and trying to keep the girlfriend happy."

Sorin Radu:

"Usually I go out into town with my fiends, listen to music, or I watch a movie."

Stepan (O)ne Grakov:

"I have wife and daughter, so I like to spend my free time with them. I also like snowboarding in the winter and mountain-biking the rest of the year."

Sven Rabe:

3D Artist, Germany

"I like to spend as much time as I can with my girlfriend, family and friends. I'm also into sports, which is a really accommodation for all of the hours spent sitting in front of the screen - for me, at least."

Vojislav Milanovic:

General 3D Artist, Animated Biomedical Productions, Sydney, Australia

"Taking really long walks. Swimming. Going out."

Zdenek Urbánek:

Student, Liberec City, Czech Republic

"It varies: sometimes I have a lot of free time and spend about eight hours in front my PC; other times I haven't time at all and I do nothing for my projects! But in each day I try, and I want, some time for my graphics."

Next Issue:

Join us next month when we will ask artists the question:

"What artwork has moved you emotionally/mentally, and why?"



image by Peter Sanitra

Announcing...



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Model by: Phillip Obretenov



Image By: Zoltan Korcsok

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SynthEyes 2007 ½

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Maybe you are shooting hand-held, and need a more professional look. Maybe you are using other stabilization software, but are tired of limited functionality, poor tracking, or strange geometric distortions in the results. We've got the cure!

SynthEyes now includes an awesome image stabilizing system, based on SynthEyes's famously fast and accurate tracking. Integrating auto-tracking and stabilization makes for a terrifically fast workflow, and means we can do all the sophisticated things to produce the highest-quality images possible. We added the flexibility to nail shots in place, but also to stabilize traveling shots. Then, piled on a full set of controls so you can **direct** the stabilization: to change shot framing, add life, or minimize the impact of big bumps in the footage. Since you've got other things to do, we multi-threaded it for outstanding performance on modern multi-core processors.

We didn't forget about pure camera tracking either. SynthEyes 2007½ adds single-frame alignment for nodal tripod and lock-off shots; a way to add many accurate trackers after an initial solve, for mesh building; a way to coalesce co-located trackers, perfect for green-screen tracking; and about 50 other things.

One thing we didn't change—our incredible price:

"I used SynthEyes exclusively while working on **Pan's Labyrinth**, and the CG Supervisor was continually amazed at how I was blowing their deadlines clean out of the water. I used the zero-weight points to model many surfaces which needed to be very accurate, so that a 3-D stick bug could walk across them." — *Scott Krehbiel*

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— *Sam Cole, FUEL*

Other recent credits: Apocalypto, Bridge to Terabithia, Casino Royale, Deja Vu, Next, Pirates of the Caribbean: Dead Man's Chest, Pursuit of Happyness, Spiderman 3, Zodiac

See the website for more details on SynthEyes's amazing feature list.

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the 3DC challenge

3DCreative Magazine introduces the 'Challenge' section of the mag. Every month we will run the challenges, available for anyone to enter for prizes and goodies from the www.3dtotal.com shop, and to also get featured in this very magazine! The 2D Challenge runs in the ConceptArt.org forums, and the 3D Challenge runs in the Threedy.com forums. Here we will display the winners from the previous month's challenges, and the Making Ofs from the month before that...

Hyena

Stylised Animal challenge

In Association with

Stylised Animal Challenge

Hyena

THE CHALLENGE Welcome to the Stylised Animal Monthly Challenge. Each month we will select an animal and post some images in the forum thread as reference. All you have to do is to create a 3D image of this creature in a stylised/abstract/cartoon style, whilst keeping your creature instantly recognisable. We wanted to publish some content in 3DCreative Magazine on how to create stylised animals, such as you see in the many feature films and cartoon galleries. We thought this regular competition might bring in just the images/Making Ofs that we need, whilst giving away great prizes and exposure. If it continues to be a success we will try to boost the prizes as much as possible! This month's animal was the Hyena. Here you can see the top seven entries, as voted for by the public.



7TH FIREHAZURD Rick Bushie - firehazurd@yahoo.com



6TH MAPE



5TH DADDYDOOM pedroldaniel@gmail.com



4TH RAGECAGE Tristan Michael - tristan.apt@gmail.com

WHAT ARE WE LOOKING FOR? Funny and humorous entries which break the animal down to its most recognisable components; emphasize these in whichever ways you think best, and render your stylised/abstract/cartoon masterpiece. The rules are pretty laid back: please submit 1 x 3D render (minor post work is OK); it's up to you if you

want to have a background or wish to include some graphical elements or text on your image. Renders of the 800 pixel dimension sound about right, but the winners will be featured in 3DCreative Magazine so if you can create some higher resolution images too, all the better! There will be one competition per month, with the deadline being the end of the month (GMT). For a valid entry, just make sure your final image is posted in the main competition thread before the deadline. We require the top 3 winners to submit Making Of overview articles that will be shown on either 3DTotal.com or in 3DCreative Magazine. These need to show the stages of your creation, different elements, and some brief explanation text of why, and how, you did what you did. We will format this into some nice-looking pages to give you some great exposure, and us some quality content. Each competition will have one main thread which starts with the brief at the top. All entrants should post all WIPs, give feedback, and generally laugh at the crazy ideas that are emerging each month!



2ND ZINKETE Diego Moises Montes - zinkete@gmail.com



3RD HUSAM huielbashir@gmail.com



1ST XINEOF Alexandre Aillet - alexandre_aillet@hotmail.com

Challenge Thread:

The entire HYENA competition can be viewed here.

The current challenge at the voting stage is:

Dinosaur (Herbivore)

The current challenge taking place is:

Dinosaur (Carnivore)

To join the next challenge, or to view previous, and / or current entries, please visit: www.forums.3dtotal.com.

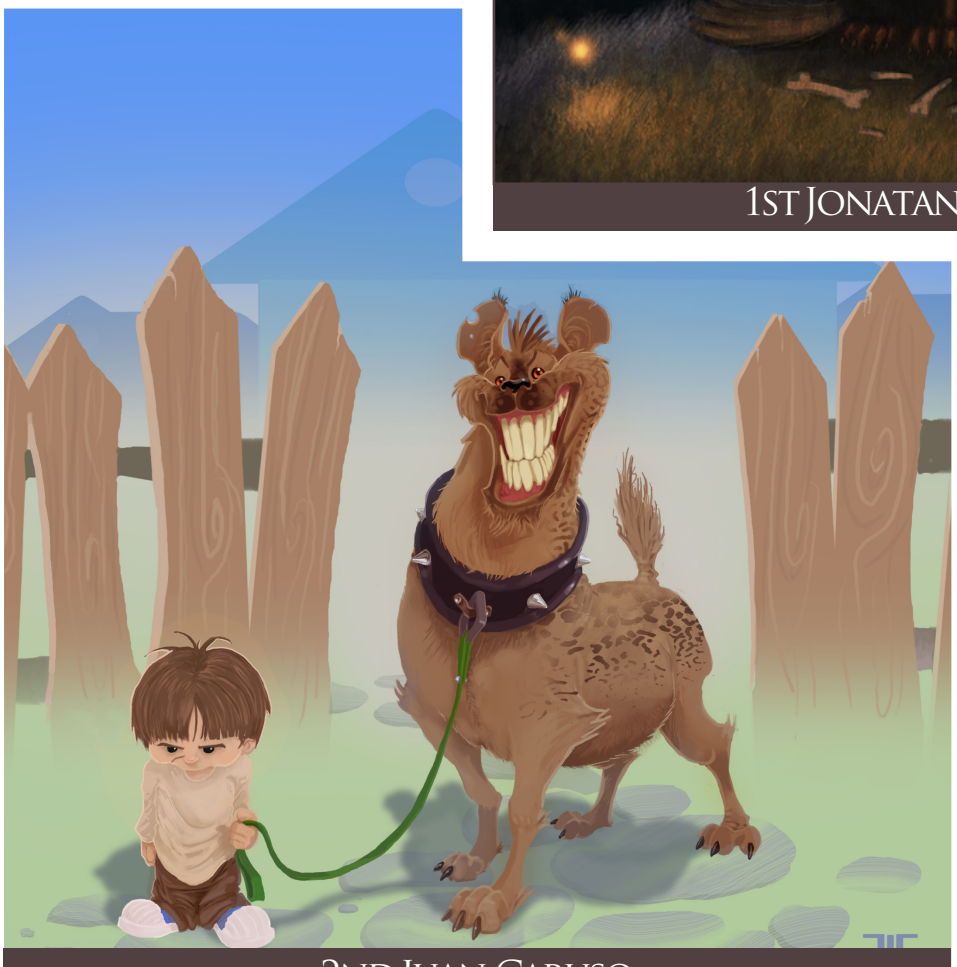
Or, for the 2D Challenge, please visit: www.conceptart.org or contact: lynette@zoopublishing.com.

2D Challenge

Here are last month's top three entries from the 2D Challenge...



1st Jonatan Iversen-Ejve



2nd Juan Caruso



3rd Cakeypigdog



Making Ofs

Here are the Making Ofs from last month's top 3 winning entries...

3rd - Shahin Fathi Djalali

Here is a short overview of what I did to make this goofy crocodile...

Character Concept

Well, although I started this one rather late, the idea of a kind and funny-looking crocodile was in my mind throughout the month leading up to the deadline... So I sketched some different styles of this creature over the month during my spare time at work, until I was satisfied with my fat & goofy one (Fig01).



Fig01

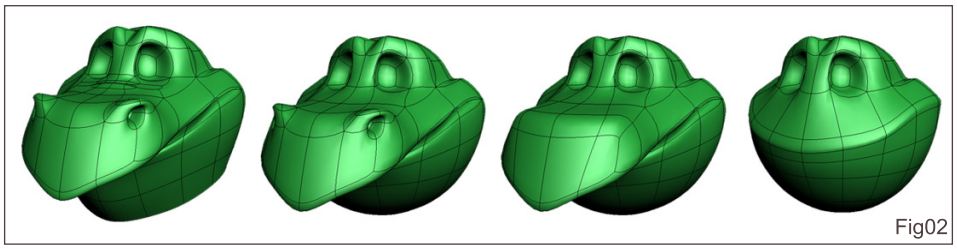


Fig02

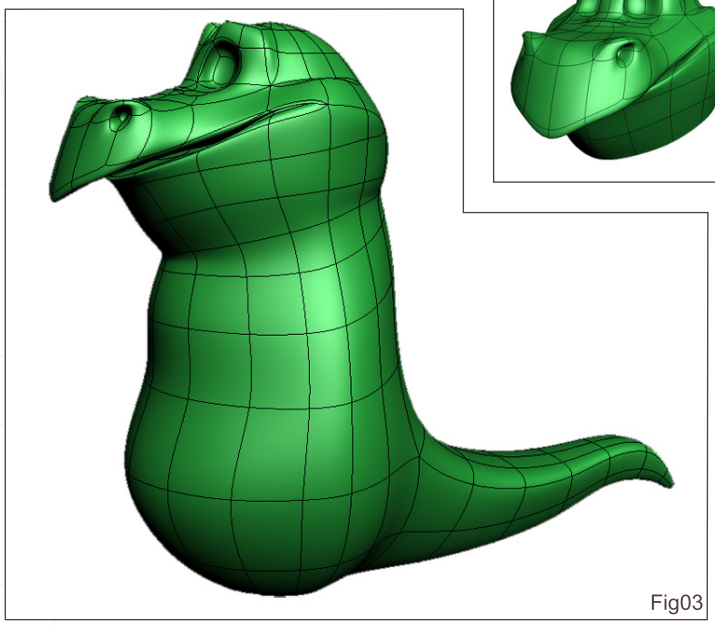


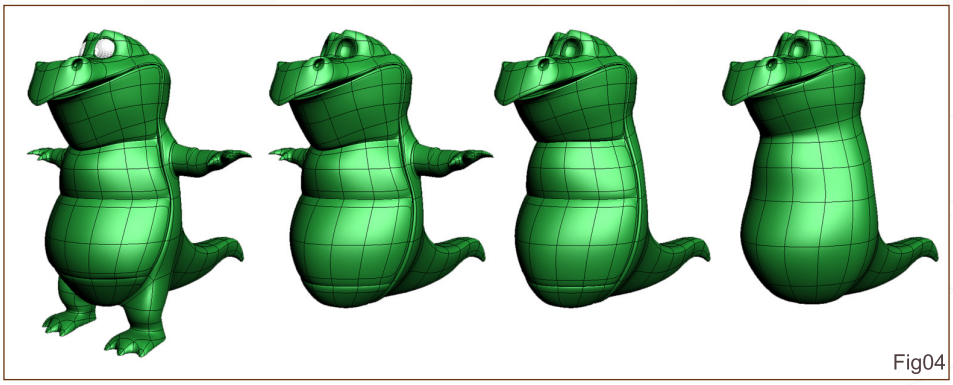
Fig03

Modelling

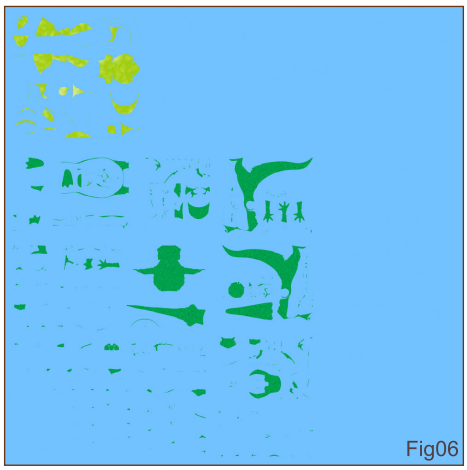
As is my usual style of poly modelling, I began by modelling the head from a sphere (Fig02). After the head was almost complete, I extruded the body's volume from bottom of the head. Actually, he has no neck, so the body and the head intersect with each other directly. The tail was created by extruding some polygons from the back area (Fig03).

When the overall volume was created, I began modelling the front sections of the body by modifying the polygons and extruding them both inside and out. A bit more work, such as deleting some polygons and

vertex welding, was done in the mouth area to achieve a clean mesh. This time, also hiding the other polygons helped me. I then I extruded the hands and feet from body. The hands are actually positioned a little lower than they should be, and I think this helps in making him look much goofier (Fig04).


Fig04

With the previous work done, and after some vertices adjustments, I considered the model to be finished. I have to confess that this is one of the cleanest meshes I've ever made! One big difference with model compared to the sketch, is that the 3D model has much more energy than the lazy one in my original sketch.


Fig06

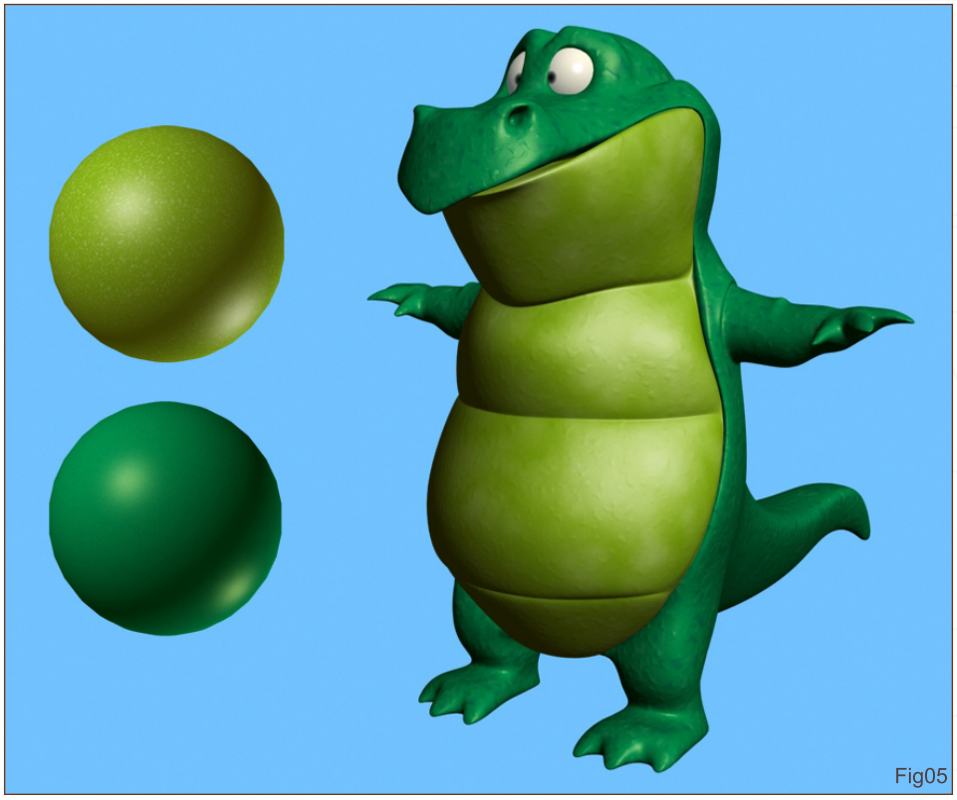

Fig05


Fig07

Textures

Since I didn't have much time to spend on my entry this time round, I made all of my textures in 3ds Max with its own 3D maps, like smoke, planet and stucco. This method was actually much easier than unwrapping UV manually (Fig05). However, there was one problem: if you want to do any animations with modifiers, like bones and skin, these 3D maps don't act like textures. I therefore had to bake textures from them. I rendered these 3D maps to texture them one by one. Actually, I left the unwrapping process to 3ds Max itself! Because I didn't want any lighting affecting the textures, I had to set the self-illumination of the materials to the maximum level. (You can see the diffuse map in Fig06.) After baking

textures for the diffuse and bump maps, my final material was a translucent shader with the textures as seen in Fig07.

RIGGING

Although this challenge was not about animation, I always prefer to rig my models and pose them after modelling. This way I can play with various poses and even make simple animations later on! The rigging of this particular model was very simple and I used the Biped system for the skeleton (Fig08).

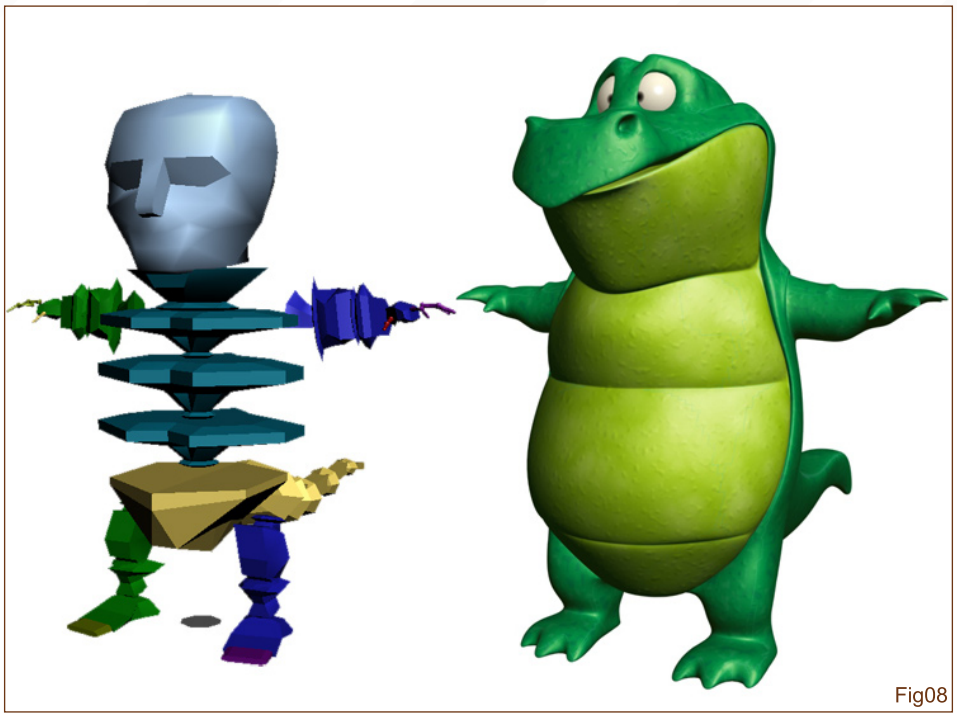


Fig08

SCENERY

I didn't have any special ideas for the scenery, but when the model was completely finished, I came up with the idea of how a silly crocodile would look if he saw a handbag made out of crocodile skin.

I quickly modelled a bag with some primitive objects, like box and Torus, and basic modifiers like bend and taper, and composed the scene as can be seen.

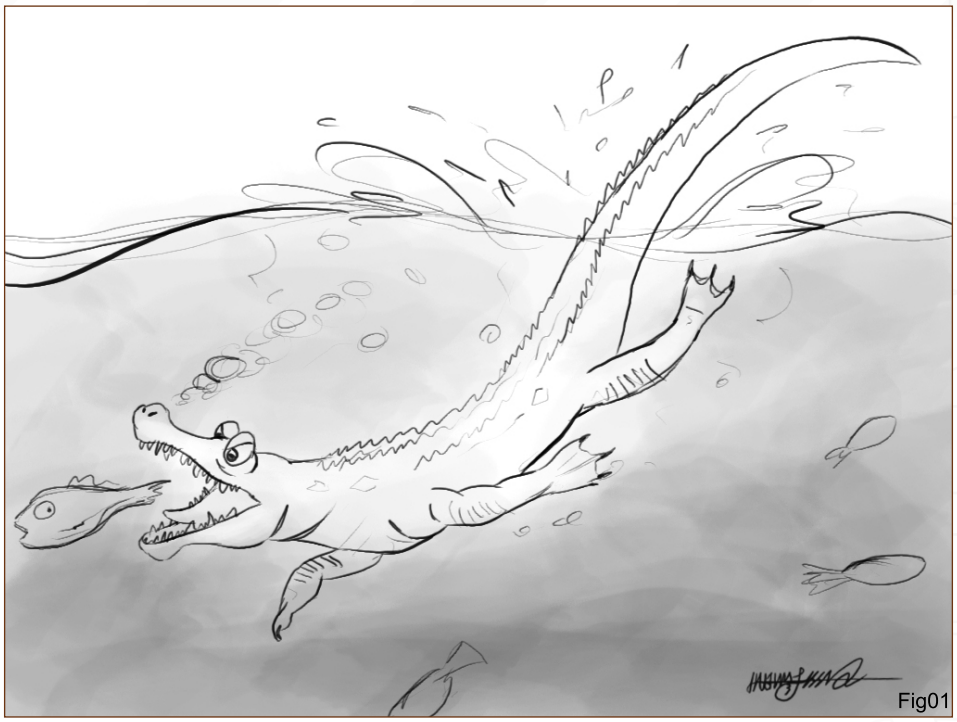
The lighting setup of the scene was very simple, as well: one Sky light plus a light tracer plug-in for the overall lighting, and a Spot light with ray trace shadows for the highlights.



SHAHIN FATHI DJALALI
For more work by this artist contact them:
shahin_fj@yahoo.com

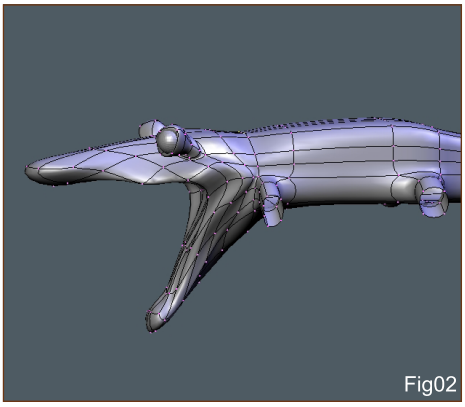
2nd - Alhaitham Jassar

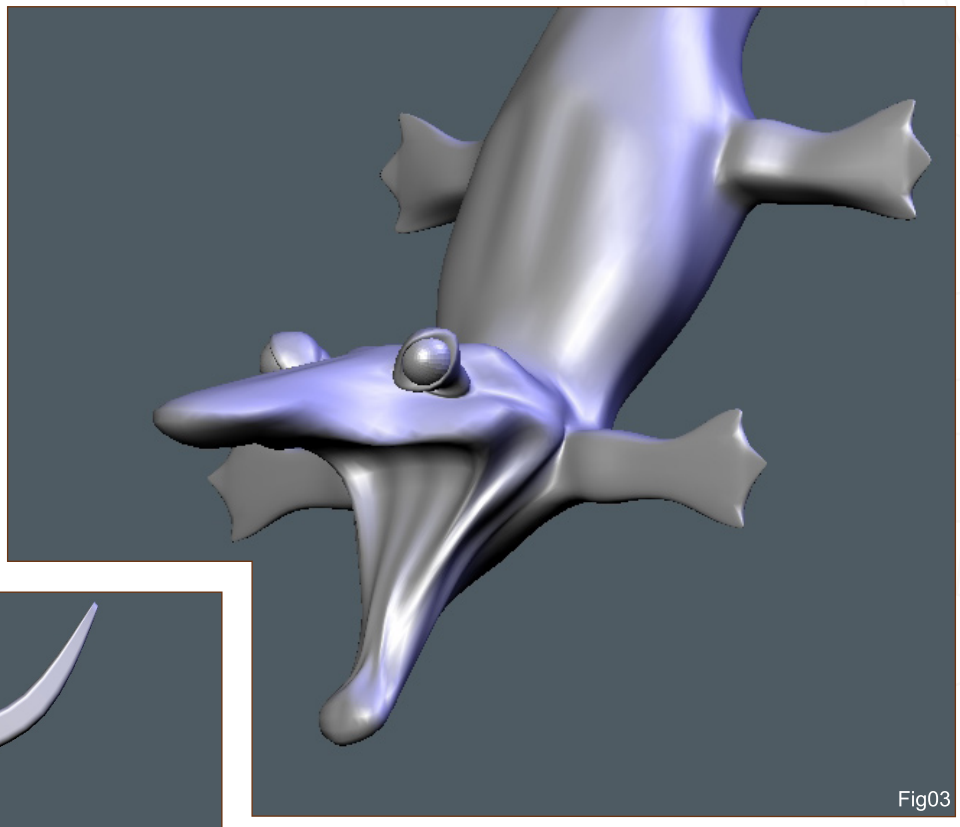
There are many ways to stylise an animal, but the one I like the most is keeping the animal's anatomy as close to the real thing as possible. So what makes the animal cartoon-like if it looks like the real one? Well, I believe it's all in the eyes and the expressions. In this piece, I wanted to tell the story of a goofy crocodile that had never caught a fish in his life, and I tried to capture the moment of him attempting to surprise the fish. This was the job of the sketch (Fig01).

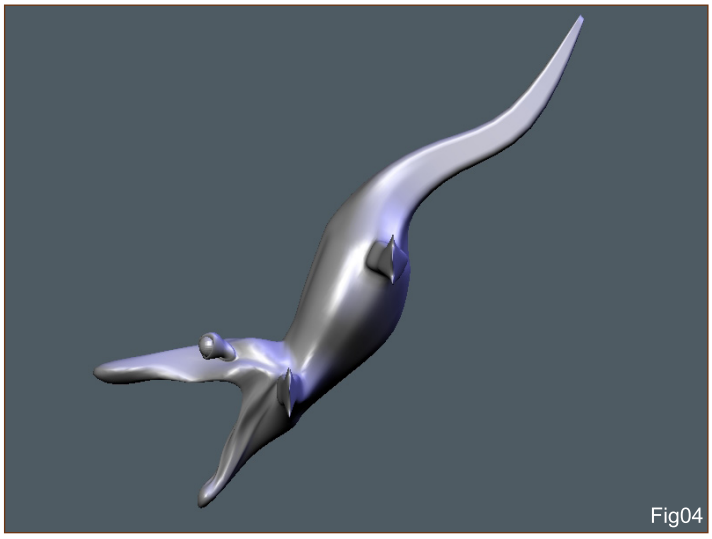

Fig01

The Croc

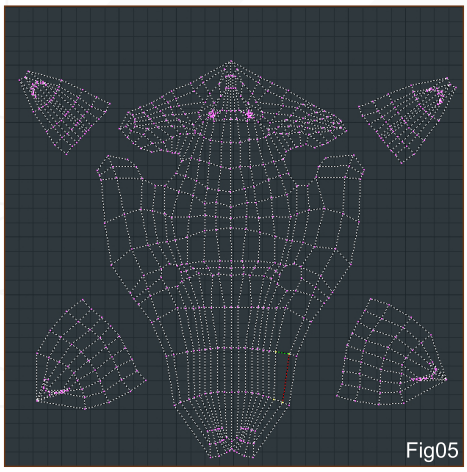
When I started to model the croc, I found it funnier to make his head big in comparison to the body. The method used to model him was the box modelling method; starting from a box and then building up the form. I kept it simple and without details at this early stage (Fig02 - Fig04).


Fig02


Fig03

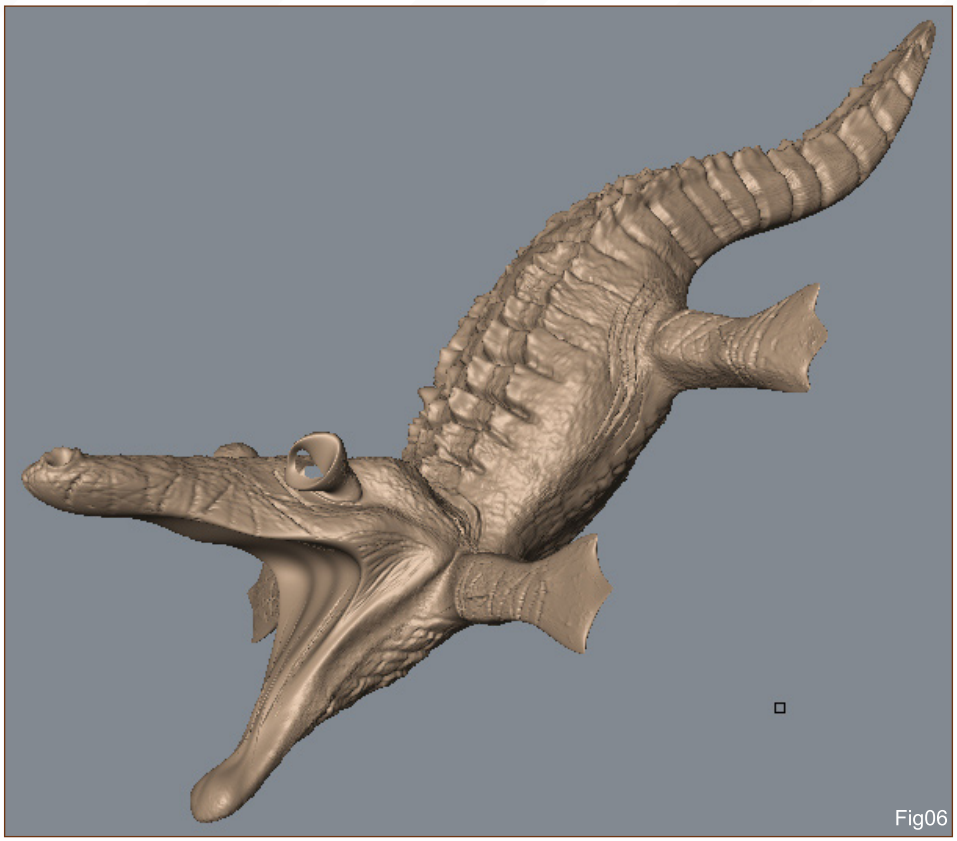

Fig04

I then had to UV unwrap the model so that I could sculpt it in Mudbox and paint the textures in Photoshop (the previous modelling was done in Blender). Luckily for me, unwrapping a model in Blender is very easy and effective. To unwrap the model, I marked the seams, then in Edit mode I selected the desired edges and pressed Ctrl + E to mark them seams. I then switched to UV Face Select mode and pressed U, then from the pop-up menu I selected Unwrap. Blender automatically unwrapped the model,


Fig05

based on the selected seams. Here's the UV layout of the croc (Fig05).

I then exported the model in .obj format to Mudbox. Sculpting in Mudbox is so much fun and so easy that it's hard not to enjoy it, so I took my time and sculpted all the detailed scales and scratches (Fig06). When I was done I exported the normal map so that I could use it back in Blender (Fig07).


Fig06

Painting the Textures

One thing about painting textures is that I sometimes use the displacement map. How? In Photoshop, I put the map in a separate layer and then set the layer to Multiply. I then paint colours under it with good detail, and the final result is similar to those when using real photographs (Fig08). Back in Blender I assigned the textures to the models, along with good shaders and materials, and made some test renders. Once I was satisfied I moved on to finish the eyes, teeth, tongue and claws. I then posed the croc to fit the scene (I didn't rig him, but if he was to be animated rigging is a must, of course) (Fig09). As for the fish, the steps of making them were very similar to the croc; I rendered each element separately and then got myself ready for the composition and post production work.

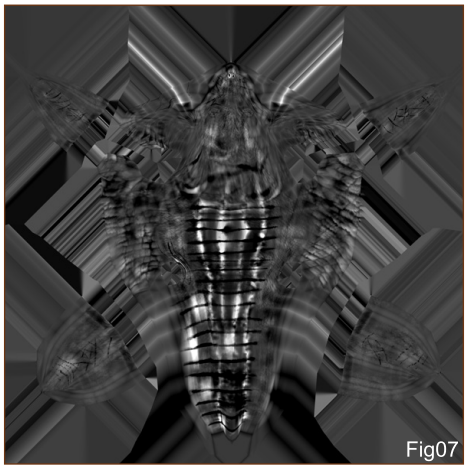
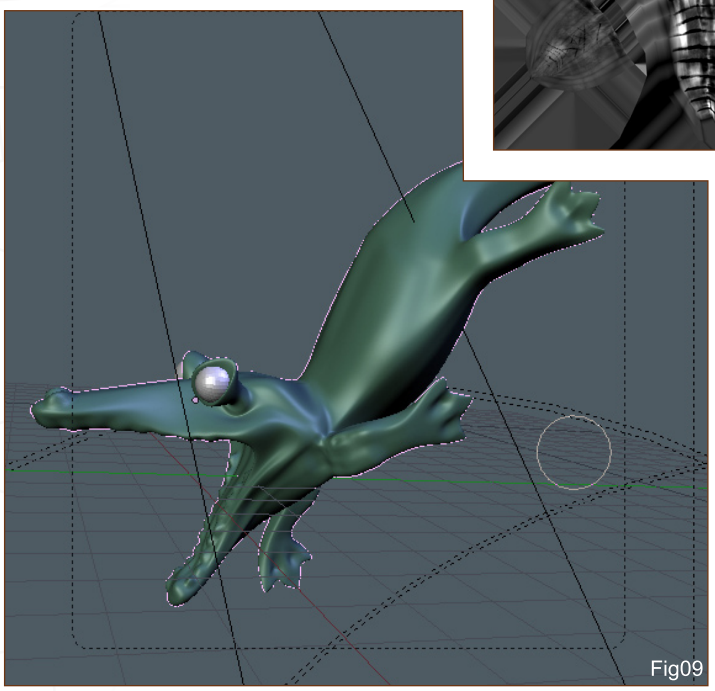

Fig07


Fig08


Fig09

The Environment

I made a plane for the water's surface, then, using Blender's sculpt mode, I made it 'wavy'. Very simple! I used Photoshop to make two separate environments (under and above the surface), and using matte painting

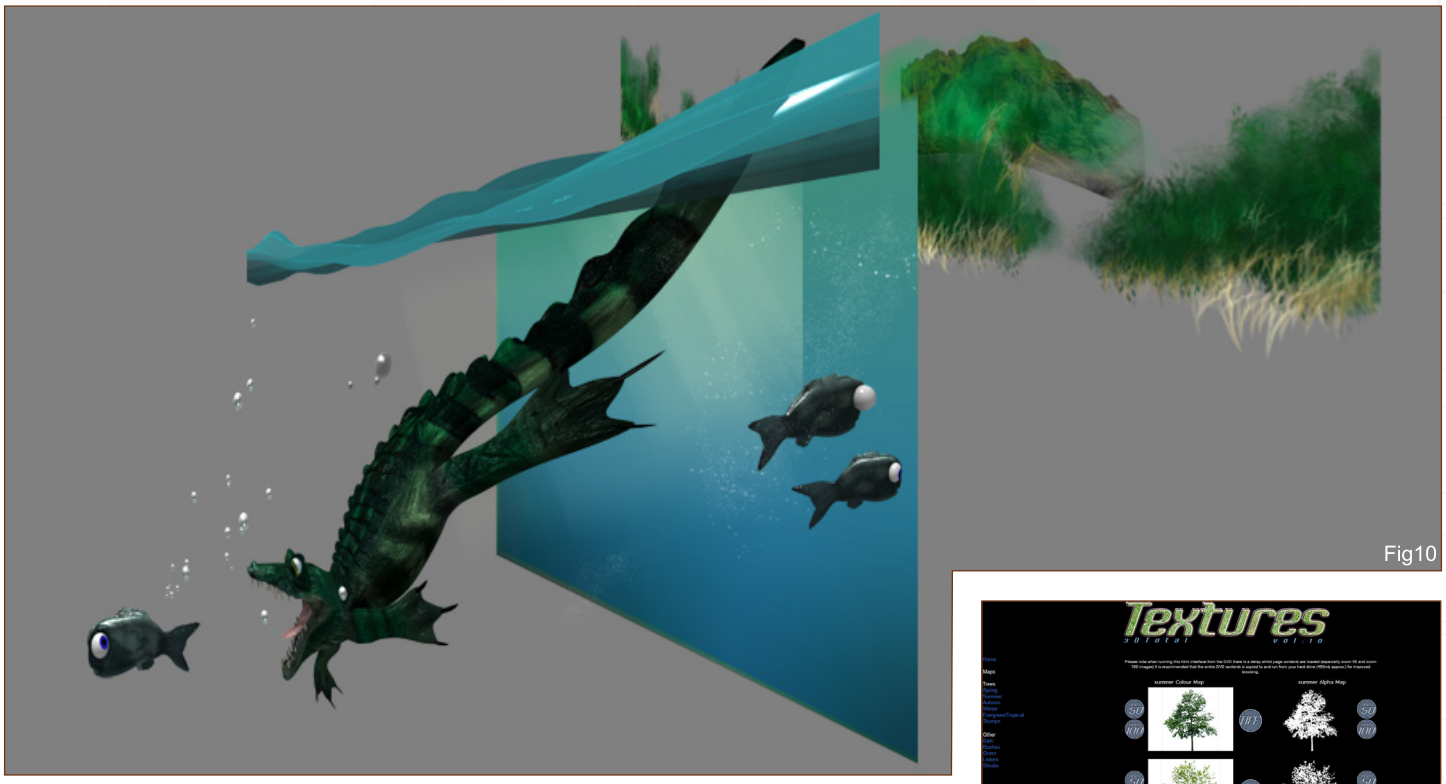

Fig10

Fig10a


Fig10b

methods, some trees were hand-painted and some were real photographs from the Total Textures V10: Trees and Plants Collection (Fig10a). The mountain was cut from a photograph and blended with the other elements (Fig10b). The entire scene was nearly done at this point, but it still needed some colour correction and balancing, so I did that.

Fig11 shows most of the elements and how they were combined. Calling this piece done, I safely went to drink a cup of coffee! Thanks for reading.



Fig11

ALHAITHAM JASSAR

For more work by this artist please visit:
www.jassarbrush.com
Or contact them at:
alhaithamujassar@yahoo.com

1st - Zinkete

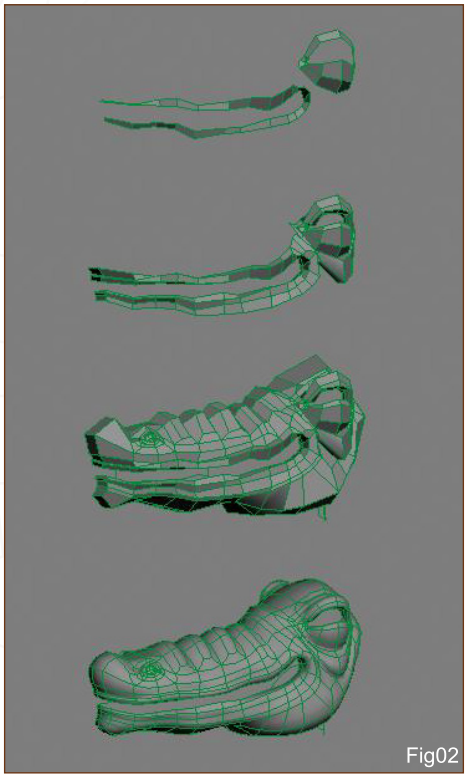
Modelling

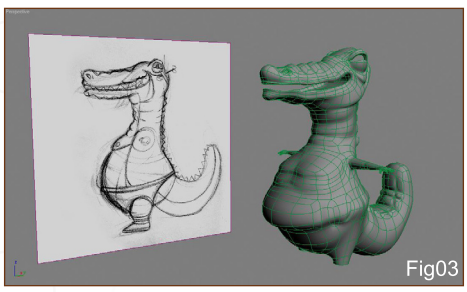
First of all, I started with a sketch which gave me the general idea about the proportions and form that I wanted my crocodile to have (Fig01).

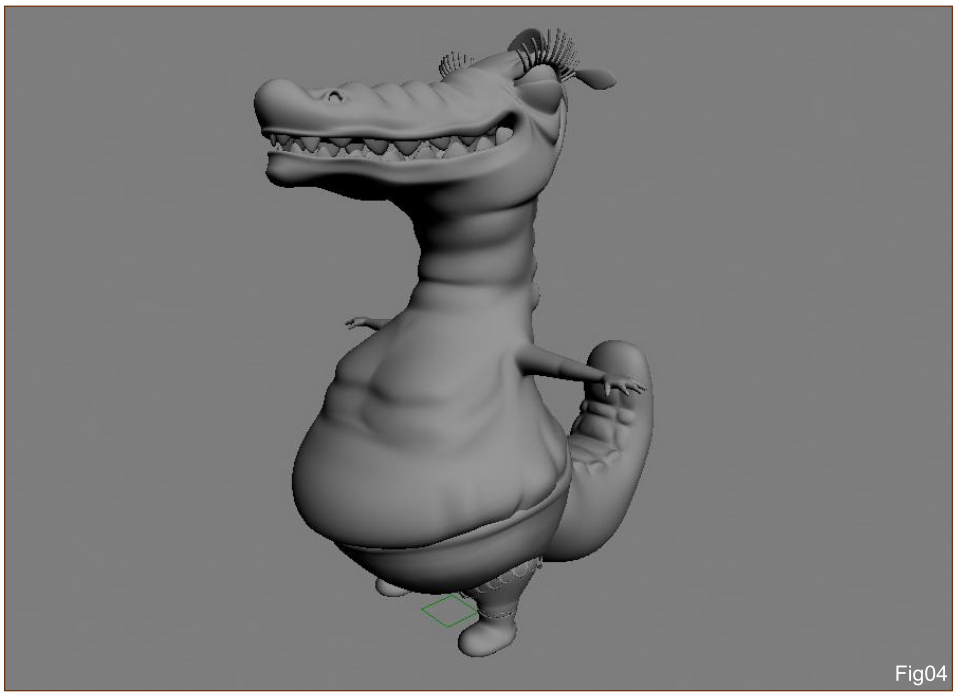
I then started modelling poly by poly, based on the sketch as a reference, creating the anatomy of the head. I then filled in the holes until I had the head finished (Fig02).

I later modelled the body, taking into account that it had to be a rather fat animal. I thought that with small arms it would seem like an obese animal (Fig03). To finish the modelling, I added panties, pink socks, a cap, and very long eyelashes to the eyes, which all helped to finish off my cute and fat female crocodille (Fig04).


Fig01


Fig02


Fig03


Fig04

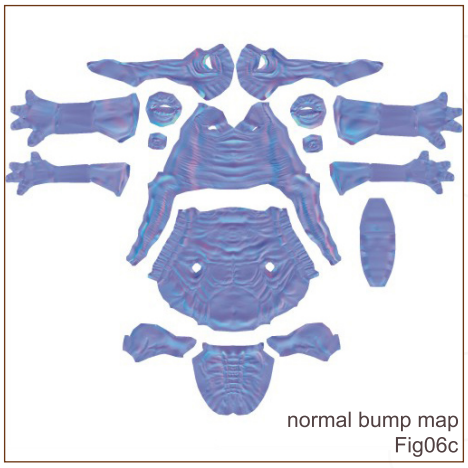
Separately, I modelled the tongue and lollipops. With the model finished, I continued my work in ZBrush.

The most important thing is making sure the unwrapping is done well. It is also very important that polys are not overlapped, because this could have an unwanted effect when we have to export the map created in ZBrush. In ZBrush I made two tags. On one hand, I sculpted the mesh in order to add more detail, in particular to get more volume and wrinkles in order to achieve the sensation of a fat animal (Fig05a - b). On the other hand, I painted the skin colour and texture with the help of a graphics tablet. Finally, I got the normal bump map and the colour map from ZBrush, together with a cavity map. You can get the cavity map thanks to the ZMapper, and it represents the deeper areas of the model in black and white. (This map will be used later in the shading process.)

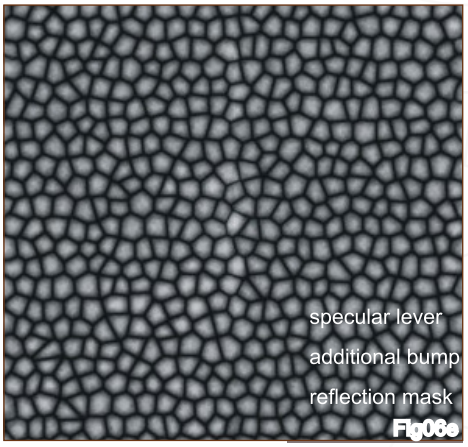

Fig05a

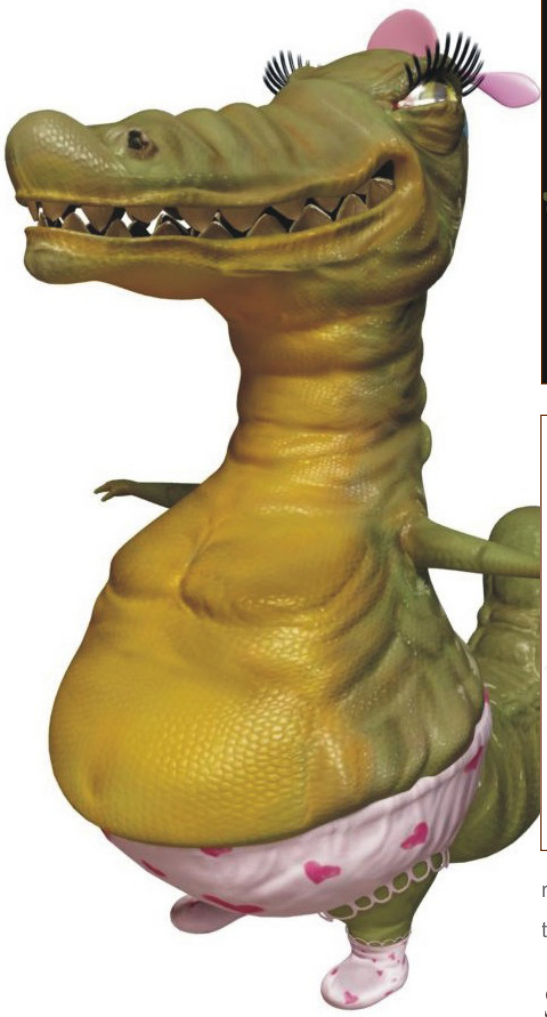

Fig05b


hand made map
Fig06b


normal bump map
Fig06c


cavity map


specular lever
additional bump
reflection mask
Fig06e


Fig06a

Shading

The body was textured basically by using the maps created in ZBrush. The diffuse carries the colour map mixed with a darker version of itself. For the mix I used the cavity map. The bump


Fig07


Fig09a


Fig09b


Fig09c


Fig08

carries the normal bump map and an additional scales bump map. The specular carries the former scales map. Finally, it was given a vray reflection, masked also with the same scale to avoid a homogeneous reflection (Fig06a - e).

The tongue is basically a vray material with glossiness and reflections and a normal bump map made in ZBrush, plus an additional bump map. The panties carry the normal bump map I got in ZBrush, plus a hand-made 'hearts' diffuse map (Fig07).

The lollipops have a vray material with reflection and refraction (Fig08). Finally, I textured the layout with funny colours and reflections, which all helped to achieve the right environment for this cute crocodile.

Posing

I used the biped system from Character Studio together with a skin modifier.

Lighting

I used the vray render engine for the lighting. I put a vray light opposite and a target directional light behind, in order to fill the outline. I also used an HDRI map for the reflection, refraction and the global illumination.

Composition

I made two render passes: One was a general render and the other was an occlusion pass. On the general render, I retouched the levels, hue, contrast and so on to get a better finish. Over this layer I applied the occlusion pass, with Multiply as the layer mode. I also added vector elements, such as stars and lines (Fig09a - c).

Zinkete

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This Month We Feature:

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Dance Macabre

Ognian Bonev

Tamás Tóthfalussy

Krishnamurti M. Costa

Adrian Tiba

Darío Lanza

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Digital Art Masters: Volume 3
Call for Submissions

Following in the success of our first two books in the 'Digital Art Masters' series, we would like to announce the 'Call for Entries' for the third book in the series 'Digital Art Masters: Volume 3'.

'Volume 1 & 2' of 3DTotal's book series, featured some of the best 3d & 2d artwork from such artists as Marek Denco, James Busby , Natascha Roeoesli, Philip Straub, Rob Chang, Jonny Duddle, Benita Winckler, Ryan Lim and Fred Bastide. The one thing that set the 'Digital Art Masters' series apart from other gallery/catalogue books was the fact that we wanted to show the readers how the images were created, so each artist wrote a breakdown overview to accompany their piece in the book.

'Digital Art Masters: Volume 3' will again be showcasing some of the finest 2d and 3d images from talented artists across the globe. Initial submissions need to be of your final image only to enable entrance into the selection process. Chosen artists then need to supply an additional text overview with 'making of' and 'work in progress' images. See samples at bottom of page to give you a good idea of what is required.

Schedule and Calendar for all submissions is availble from this web link:

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3D Environment lighting



3D Environment Lighting is a new 6 month tutorial series. Over the course of the next six months this series will be detailing techniques to lighting an environment under a number of different conditions. Each month will cover a step by step guide to setting up lights aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light and finally a submerged submarine light.

3DSMax Version Page 114

Cinema4D Version Page 127

Lightwave Version Page 136

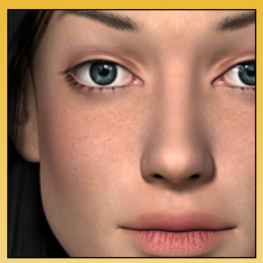
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This Month :

Environmental Lighting Part 5 - Candle Light

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Character Creation

Part 1: Modelling by Gavin Goulden: Making of a Next Gen Monster

"A few important things to keep in mind when creating a base mesh is that the topology doesn't need to be built to deform..."

The first part of this two-part tutorial on creating a character for next gen games, by Gavin Goulden, takes you though creating a high-poly model and getting it ready to begin creating a normal map...

Part 1
Covers Sculpting, Base Mesh, High-Poly & Low-Poly

Part 2
Covers Normal Map Generation, Texturing and Rendering the Character

MINDFLAYER

CHARACTER CREATION:
MAKING A NEXT GEN MONSTER
PART 1 - MODELLING

CREATED IN:

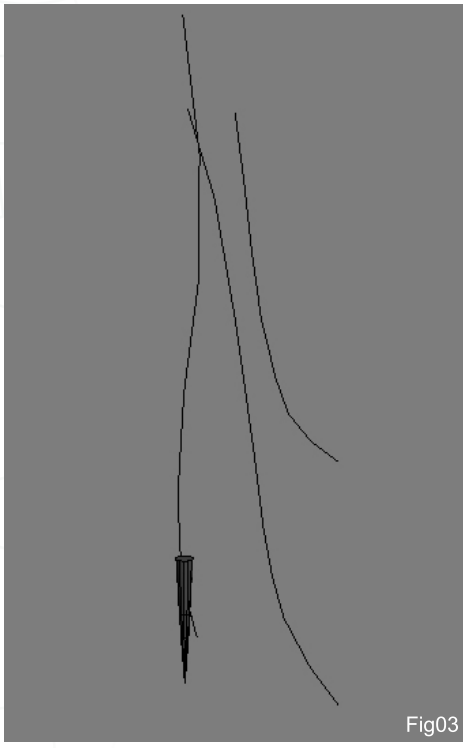
3ds Max and ZBrush

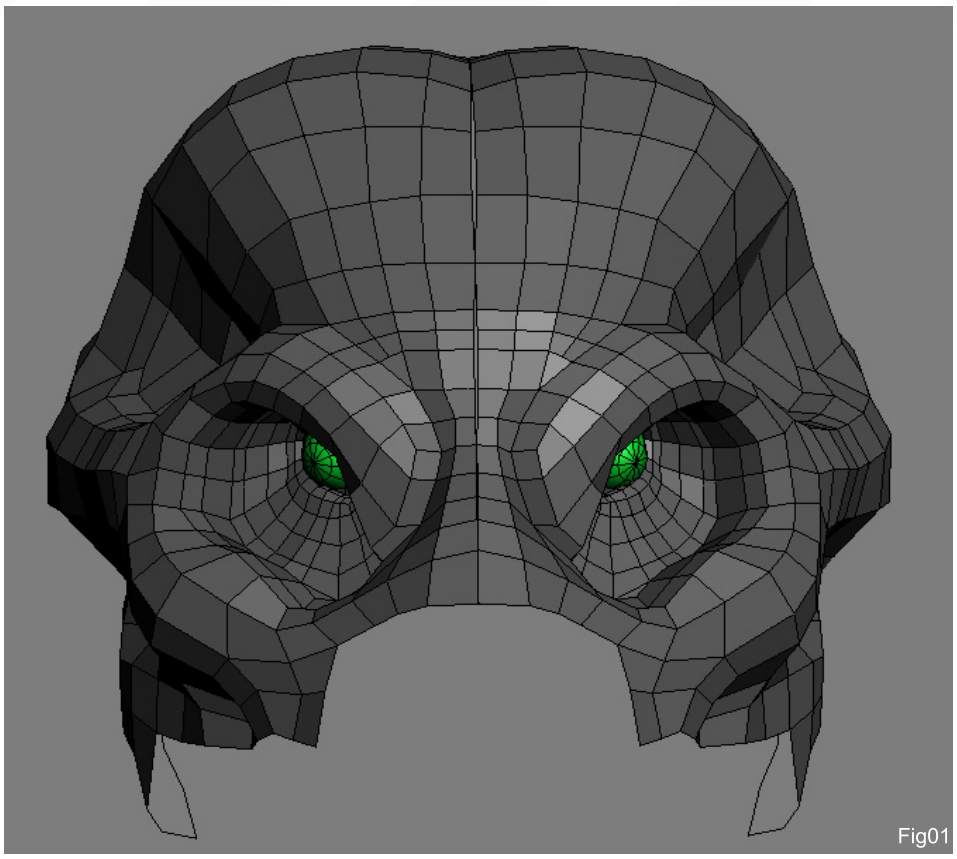
INTRODUCTION:

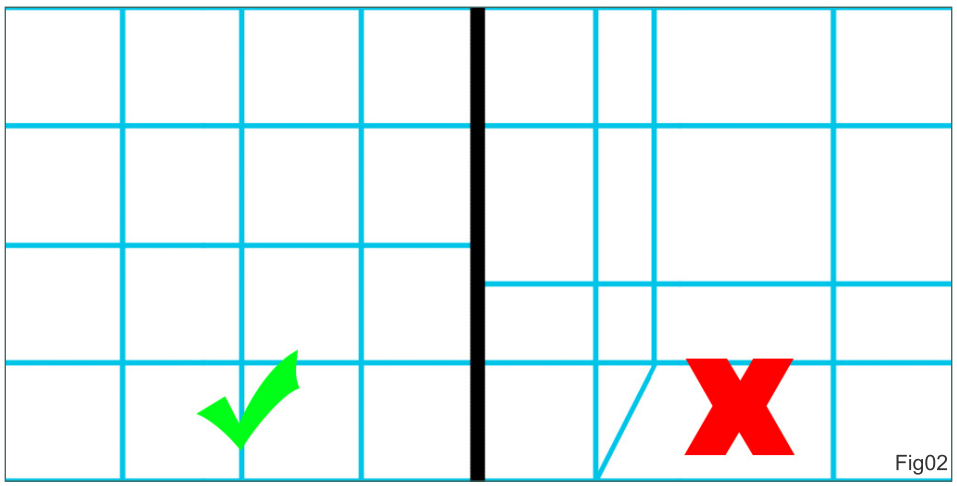
This tutorial is intended to walk you through the creation process of my latest personal project, 'The Mindflayer Bust', and to give you a better understanding of creating characters for next generation games.

GATHERING CONCEPTS:

The Mindflayer (or Illithid for the truly geeky) is a well established monster type and is well known. That being said, there are tonnes and tonnes of different interpretations on how it should look. I chose to follow the image provided with the '3rd Edition Monster Manual' published by Wizards of the Coast. This image gave me good reference for detail and colours.


Fig03


Fig01


Fig02

BASE MESH WORKFLOW

Creating the Base Mesh

When I begin a character, I create a base mesh that will serve as the foundation for my high-poly sculpt, and later on as the beginning of my low-poly mesh. I begin by roughing in the key shapes, which in this case was the eye socket and heavily protruding skull bones. From there I worked my way out using the edge extrusion method (copying edges and manually moving them in the 3D space) to rough out the rest of the cranium and the jaw (Fig01).

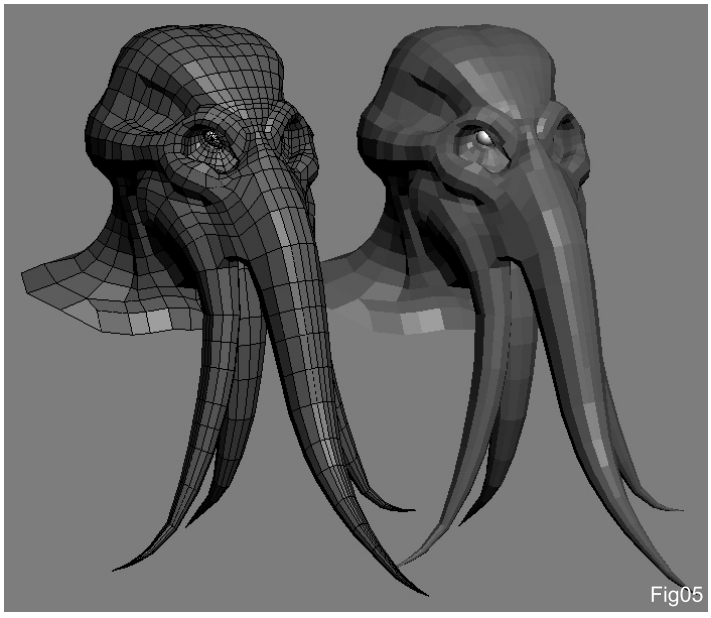
A few important things to keep in mind when creating a base mesh is that the topology doesn't need to be built to deform and, even though the later version of the base mesh will be an in-game asset, it should have as few triangles as possible. So, this means that your mesh should all be the same amount of density and the polygons should be nice, even squares (or as close as you can make it.) The reason for this is that when you bring your base mesh into a digital sculpting package, like ZBrush, and attempt to subdivide it, the subdivision will

happen all over. If some parts of a character's face are nice squares but the top of its head is long rectangles, it will subdivide awkwardly and you will definitely notice distortion when attempting to sculpt over the long rectangles (Fig02).

After I blocked in the skull, I was ready to move on to the tentacles. For some reason this proved to be very awkward. I didn't want to have them straight out or straight down as I would have to alter the face due to stretching/ folding. So, I went with a neutral relaxed pose. I attempted to model them straight out of the head using my beloved edge extrusion method, but I just couldn't get the shape right. I decided to create the tip of the tentacle and then drew splines outlining how I would like the tentacles to flow - adjusting the thickness once it got closer to the head itself. Once I did this I connected the tentacles together by creating the flap of skin in between them. To do this I simply deleted polygons facing each other and then bridged faces together, adding depth to show the skin's thickness (Fig03 - 04).

Now I attached the tentacles to the head by combining them into one object, welding points and creating polygons where needed. Once all of that was completed, I roughed out the neck muscles and clavicle (Fig05).


Fig04


Fig05

Creating the cloak's base used the same method by roughing out the main shape using the edge extrusion method. I created it as a separate object to help manage sculpting and to lighten the load when it comes time for importing and exporting. You'll notice that one of the tentacles clips through the cloak due to the way in which it hangs off the face. This is okay though, since I will be moving the objects away from each other to bake the textures and will be positioning the tentacles later on in the final version, using a simple rig (Fig06).

Now, make sure your mesh is clean, has no floating vertices, no awkward open edges, has a logical pivot point (for me, usually 0,0,0), and then export your pieces as OBJ files, making sure that they have appropriate names.

HIGH-POLY WORKFLOW

When sculpting a high poly mesh in a program such as ZBrush, it's always a good idea to work your way up in subdivision levels. It is very tempting to just dive right in and add fine detail to your model, but you must resist! Don't worry though, the time will come to add all the finer details. If you attempt to add details at a high subdivision level before building up the form on lower levels, it will all come out looking blobby and will cause you a lot of headaches.

I imported the head OBJ and began by focusing on the bigger shapes of the model, much like the base mesh, the eye socket, skull bones and bigger neck muscles/tendons. By simply selecting a standard brush, I pushed and pulled the shapes that were already laid out in my base mesh (Fig06).

After this, I subdivided more and worked my way up to the smaller details, like the wrinkles on the neck, tendons and bigger bumps in the skin (Fig07).

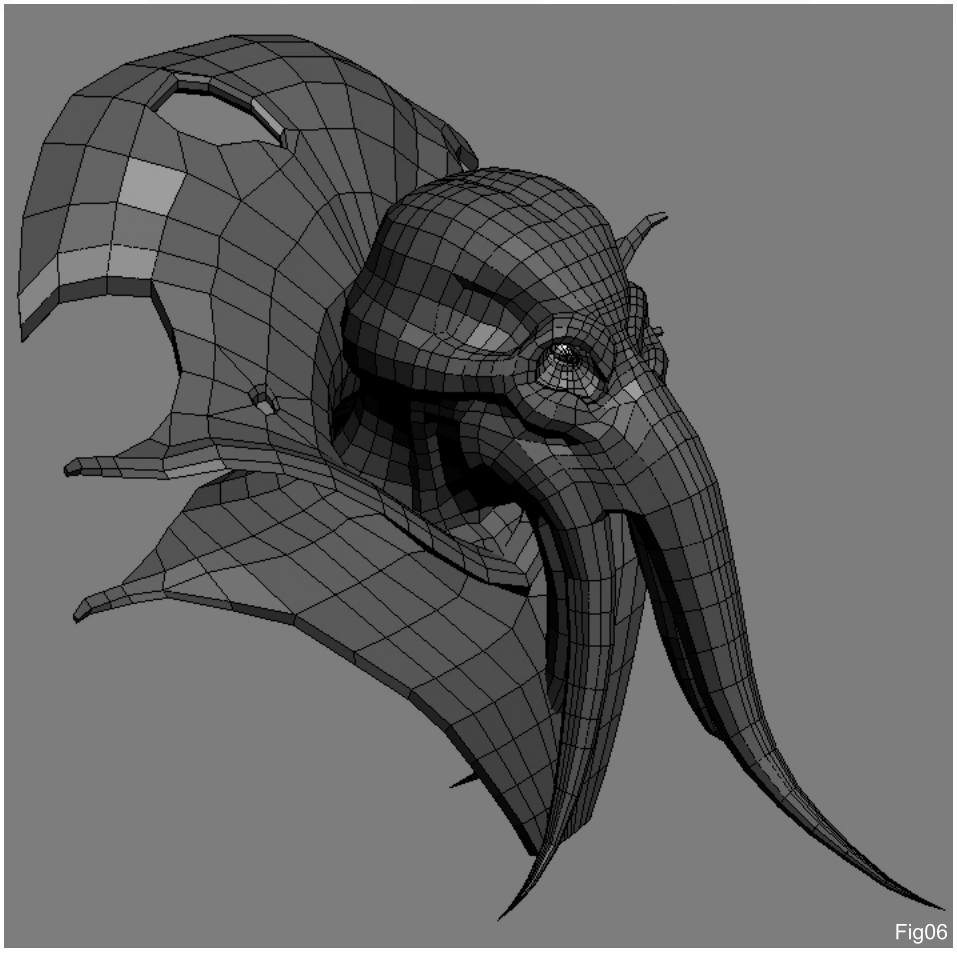


Fig06



Fig07

I also began focusing on how the muscles and flesh would work on the top of the head. The Mindflayers are a highly intelligent race; I believe the top of their heads are intended to look like a brain. So, keeping this in mind I tried to hint towards the brain shape by splitting it into two halves and defining sections of muscle. To really push these shapes I first built them up using a standard brush and then subtracted an area around them. Nothing major: just a small line and setting the brush to a small size - just enough to create a cavity between the "muscle" and it's neighbouring section. After this cavity was created I switched to the pinch tool to make the difference between the two shapes very sharp. I find that using this sort of method, over exaggerating shapes, translates really well when generating normal maps (Fig08).

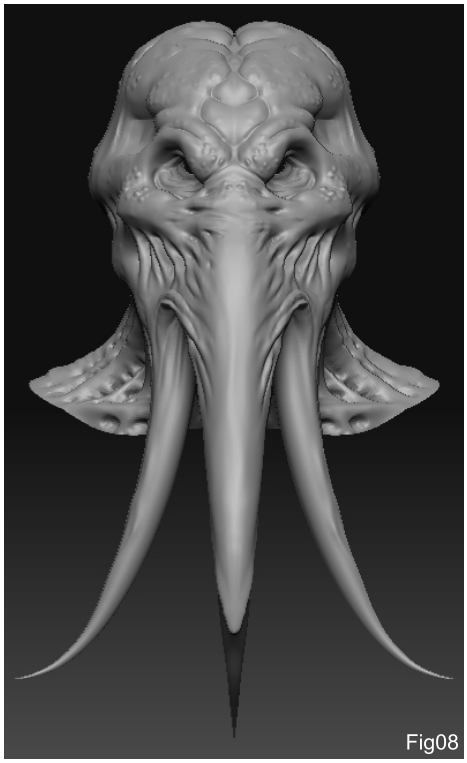
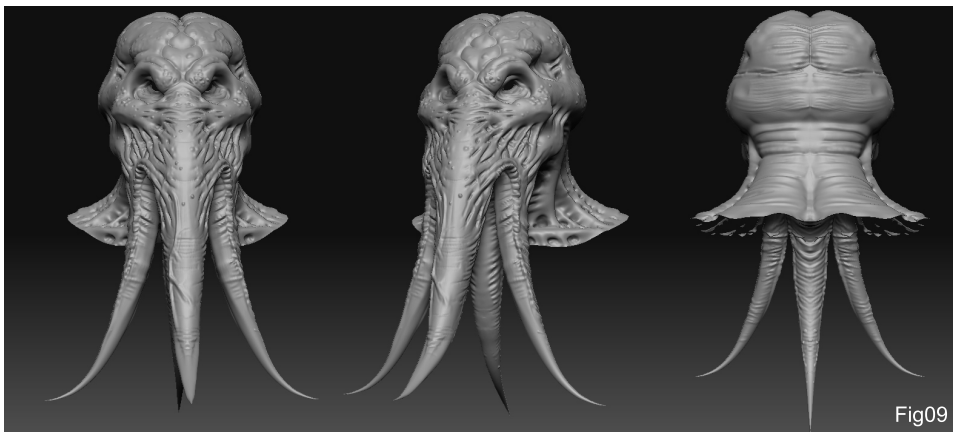

Fig08


Fig08

From that point I just kept adding more details; wrinkles and blemishes around the eyes and tentacles, veins, folds where the tentacles meet, and so on. Mostly I just pushed and pulled with a standard brush and went in after with the pinch tool to really sharpen up the details. I also went over the bony, hard surfaces like the cheek bones and jaw for variation. By doing that you can see a clear difference between his fleshy skull and his harsh, sharp cheek bones (Fig09).


Fig09

When it comes to creating a high-poly model for games and, more accurately, normal map generation, you must be careful over how much detail you add to the digital sculpt. There are a few reasons for this. One is that adding very fine detail to the sculpt can sometimes barely translate onto the normal map. There are only so many pixels on the normal map; the smaller details can cause the final normal map to look "muddy" if done this way. The smaller details can also get lost completely, so another reason is that it could simply be a waste of your time. Keep in mind what your character is for. What is the model's purpose? If the character is a background character that you'll barely ever see, why bother spending your time concentrating on small details that you'll never notice? Either way, if you want to have very fine details in your normal maps, such as cracks,

skin pores and so on, then I find it's much less time consuming and more efficient to create them in Photoshop using the nVidia filter (which I will cover later on).

Once I'd put the finishing touches on the high-poly head sculpt, it was time to add detail to his cloak. I opened a new document, reduced the tool's subdivision levels to 1, and deleted the higher levels (don't forget to save your tool!). This allowed me to import the cloak OBJ and begin work on that.

Following the same idea as for the head, I roughed in the bigger shapes, such as the layers of leather and the larger wrinkles on the neck section of the cloak. From there I kept subdividing and added finer details. To help show that his clothing wasn't necessarily pristine, I added dents into the leather and helped push the holes torn into the material by adding damage marks around them. Cuts and dents were made by making a cavity with a Standard brush, building up mass around it, smoothing out the added part away from the cavity so that it didn't look like tubes, and then pinching the cavity (Fig10).


Fig10


Fig11

To make sure that both pieces worked well together, I saved the cloak as it's own tool and opened up the Mindflayer head tool. Once there, I went into the subtool menu, clicked "Append", and selected the cloak tool. Now both objects were visible and I could mange them individually, much like how layers work in Photoshop (Fig11).

Low-Poly Workflow

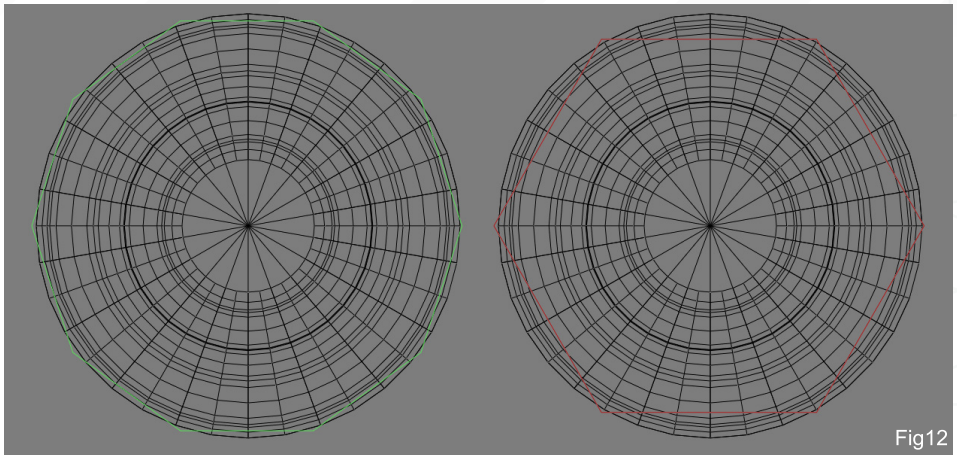
Remember when I mentioned the base mesh at the beginning of the 'Base Mesh Workflow' section? Hopefully you do! Well, looking at the base mesh model itself, the topology is clean and I know that the shape of it will support my high-poly model when it comes the time to make a normal map. The only things preventing

this model from being passable as an efficient in-game asset is the polycount/density of the mesh, and that the mesh isn't necessarily optimised for deformation.

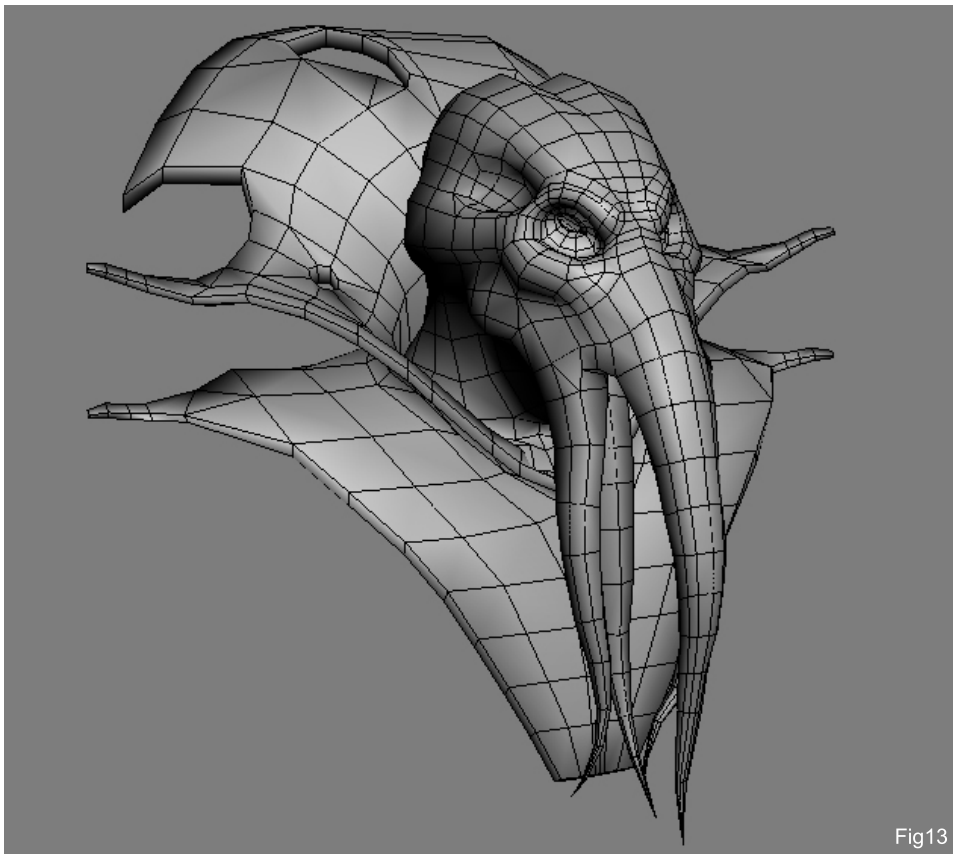
Here are some things you should keep in mind when creating a low-poly model for a next gen character:

- Your low poly model must have enough geometry to support the high poly details. If your low poly model is too low poly, the illusion that it is a higher poly count will be lost.
- The same idea also applies to keeping the same silhouette as your high poly model. Nothing kills the detail on your model like being able to count the triangles on your mesh.

In the sample (Fig12) I've created a simple example showing what I mean. The black wireframe is the high-poly mesh, the green wire frame is a good shape for a low poly model, and the red wireframe is a bad shape. You'll also want to keep your edge flow in mind. It is now going to be based on deformations rather than subdivisions, so edges will need to be added, subtracted and redirected to make sure there is no awkward pinching and collapsing when it comes the time to animate (Fig12).


Fig12

Making this model 'game ready' is a fairly simple and tedious task. Basically, I analysed my mesh and determined where I needed to keep edge loops and what edges were not needed for deformations, supporting the normal map and keeping the same silhouette as my high-poly model. After determining this, I simply selected the edges and removed them and their associated vertices. Because the base mesh is more or less all quads and generally made entirely out of edge loops without odd termination points, it is very easy to remove unwanted edges. This is a low poly, in-game model so it is fine to have triangles and to terminate edges as needed to meet your requirements. This is only a bust though, so there isn't much deformation to worry about. I knew that the tentacles would need to bend and have the ability to be snake like, so I kept enough geometry there to support that.


Fig13

Once all of the unwanted edges were removed, I straightened up any lines that seemed out of place and am now ready to begin creating the normal map (Fig13).

Next month, we cover normal map generation, texturing (with the help of 3DTotal Textures), rendering, and finally putting it into a game engine to view using the Roboblitz/Unreal editor!

CHARACTER CREATION:
MAKING OF A NEXT GEN MONSTER:
PART 1 - MODELLING

BY GAVIN GOULDEN
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"Different people set different time limits when doing speed sculpts. For some people, fast is four or five hours; with other people 30 minutes to an hour is fast for them"

Wayne Robson is becoming widely recognised for his 'speed sculpting' techniques in ZBrush. This month, he has created a tutorial on how to speed sculpt a monster head...

by wayne robson

speed sculpting in zbrush

speed sculpting

CREATED IN:

ZBrush

INTRODUCTION

Speed sculpting is an often misunderstood skill' its purpose is not to produce the perfect model, but more to sharpen our skills. When starting out digital sculpting using ZBrush, it can often be hard to produce a good looking digital sculpt, never mind doing it at speed! The purpose of this article is to teach you the rudiments of sculpting at speed. The reason behind this is so that you get used to the shapes and forms that you need to know as a digital sculptor.

Different people set different time limits when doing speed sculpts. For some people, fast is four or five hours; with other people 30 minutes to an hour is fast for them. But like anything else, the more you do something the faster you get. So as a result time, I normally take between 30 minutes and an hour or so.

In this example we're going to try and invent and sculpt a monster head concept. You may be interested to know that often these heads that I make from spheres make their way to become heads on final sculpts taking a lot longer. This is mainly because creating the head of the character can take the longest time, so as a result this is a wonderful way of cutting down on the development time for a concept.

Anyway, let's get down the project and I'll explain everything I do as and when I do it,

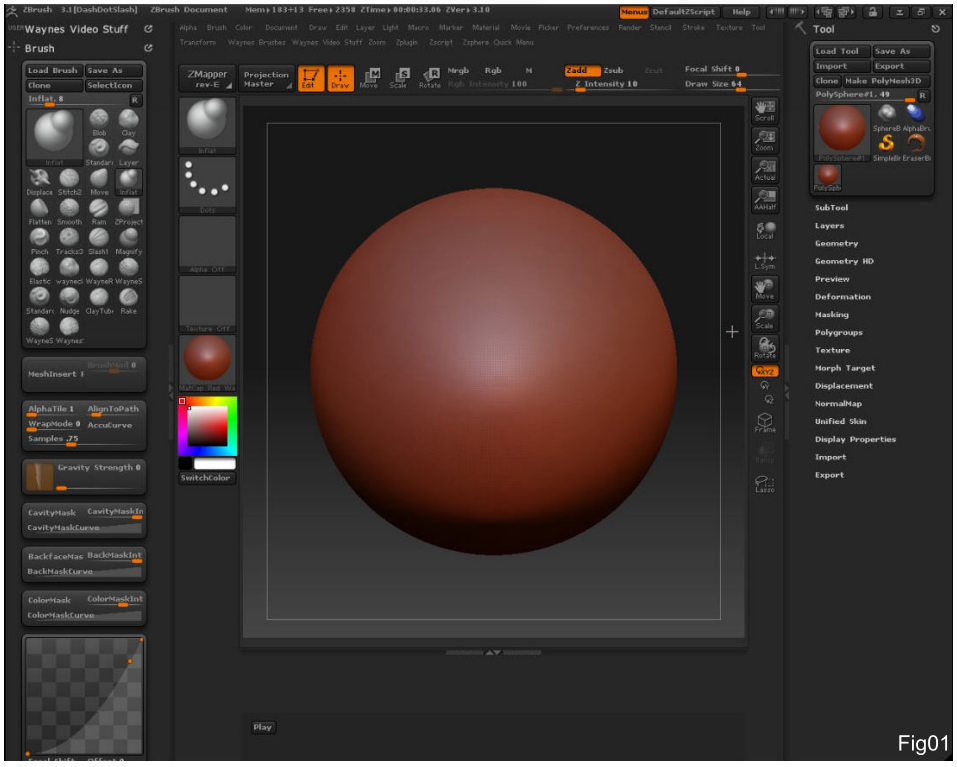


Fig01

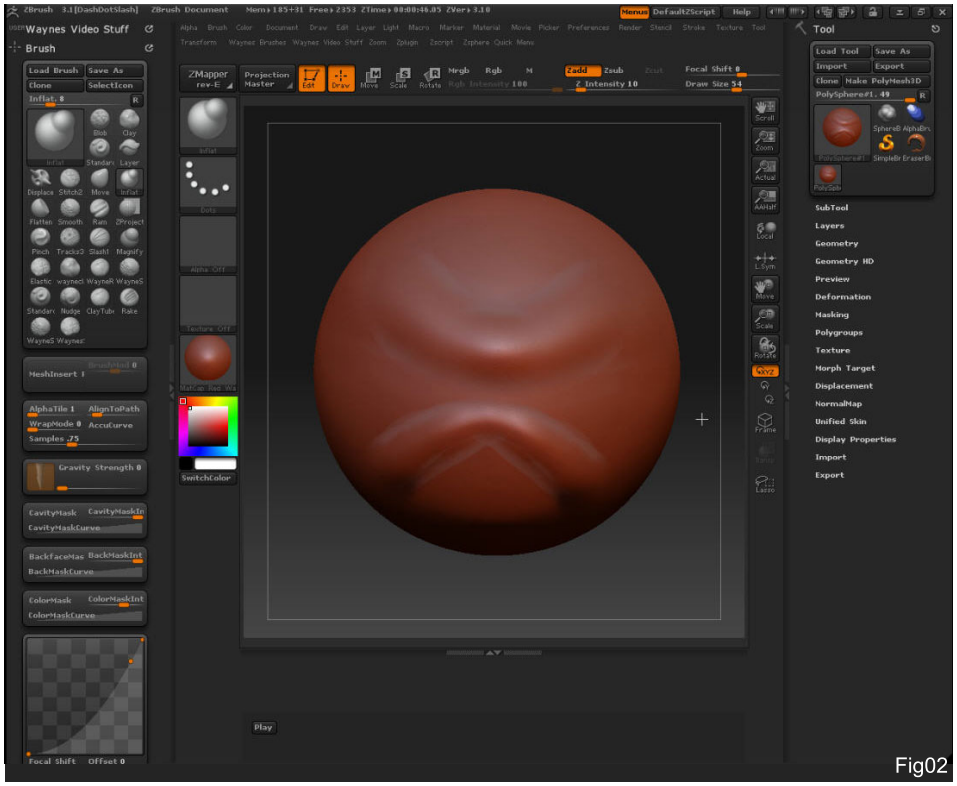


Fig02

although we are constrained as to how much I can include by the length of this article.

This particular head actually made its way into one of my current works in progress, called 'The Spirit of Halloween'. So as you can see, this isn't just a pointless, practical exercise.

STARTING WORK.

The Poly sphere tool in ZBrush is rather special in that it's actually made from a cube that has been subdivided. This makes perfect and speed sculpted heads and such, and is the reason why I use it for a lot of my speed sculpts. I like to

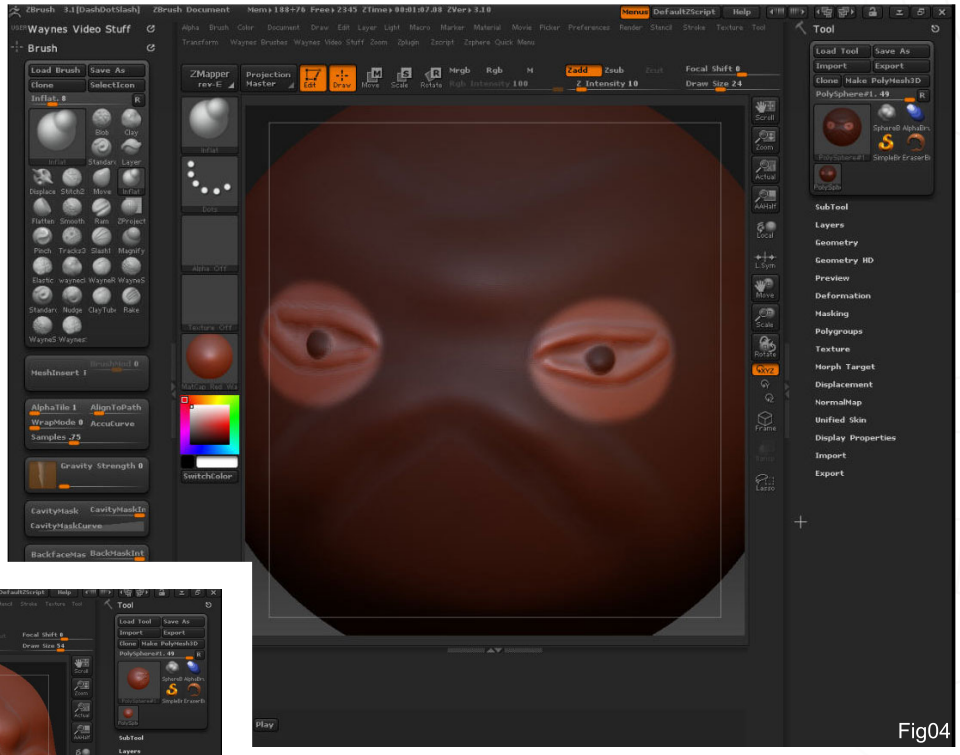
call them 'Sphereheads', mainly as it is a catchy name, although the spheres are actually made from cubes. I should also add that there is no reason in the world why you can't use more than one sphere. This sometimes comes in handy when adding things like eyes (Fig01).

This is one of a whole host of workflows and patterns that I use when developing these heads. This particular one I call the "X-formation". As can be seen from Fig02, the first thing I do is to make an X on the sphere using the standard brush, or the inflate brush. This will eventually become our eyebrows, and the beginnings of our cheeks (Fig02).

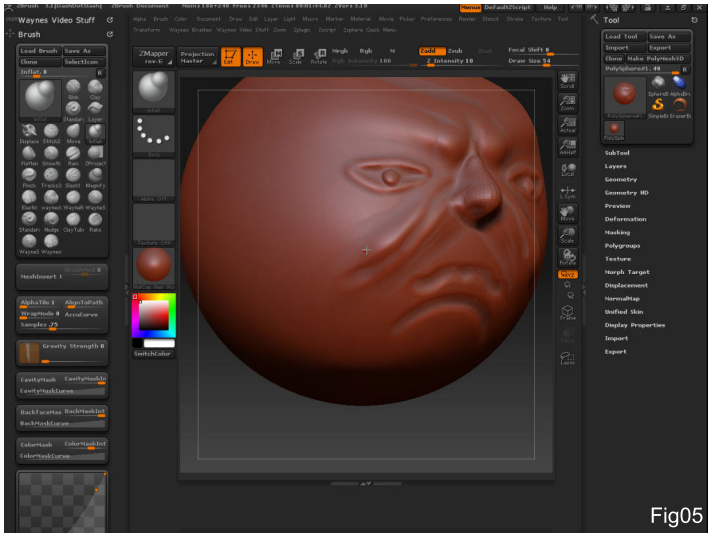
As you can see from the next image, I then mask off two circles where I wish the eyes to be, and then remove where the pupil will be from the mask. To mask in ZBrush, you can use any brush and simply hold down the Control key. To remove an area from the mask, hold down the Control and Alt key at the same time (Fig03).


Fig03

Now it is time to add some rudimentary eyelids, although at this stage we are not too bothered about the details or accuracy, only the size and placement of them. By inverting your mask we can correct the shape of the pupils, if needed (Fig04).


Fig04

Around now, I like to add the nose; I usually start with a couple of simple brush strokes, as you can see. This can then be pulled out later on using the move tool. It is also around now that I start to add the nasal folds and inflate the cheekbones to give the face a bit more shape. As you can see, I also put a place holder in for the mouth (although halfway through this particular sculpt I changed my mind completely, this is the beauty of speed sculpting as it's far easier to change things!) (Fig05).

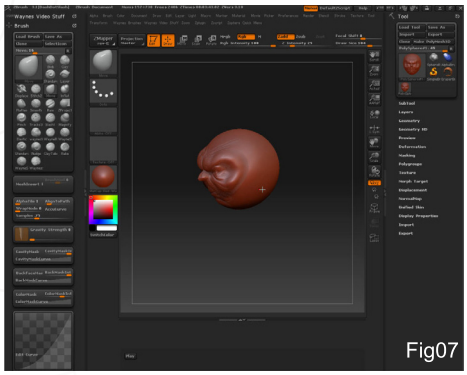

Fig05

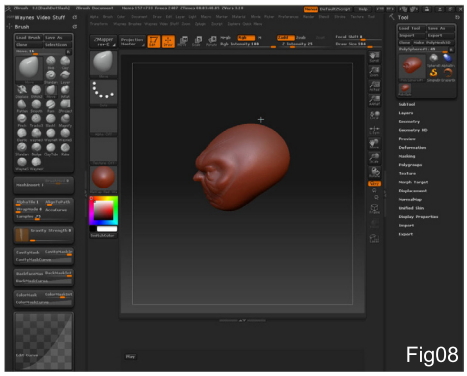
By using the clay brush, I can stop some of the major forms running into one another. By pressing the Off key I can take away from the mesh or

even change to the displace brush. If you have a highly detailed surface, the displace brush will allow you to push your geometry in or pull it out without affecting your high-resolution detail. I often use this brush to save me changing brushes later on in the sculpture, as I find it makes faster workflow to use less brushes (Fig06).

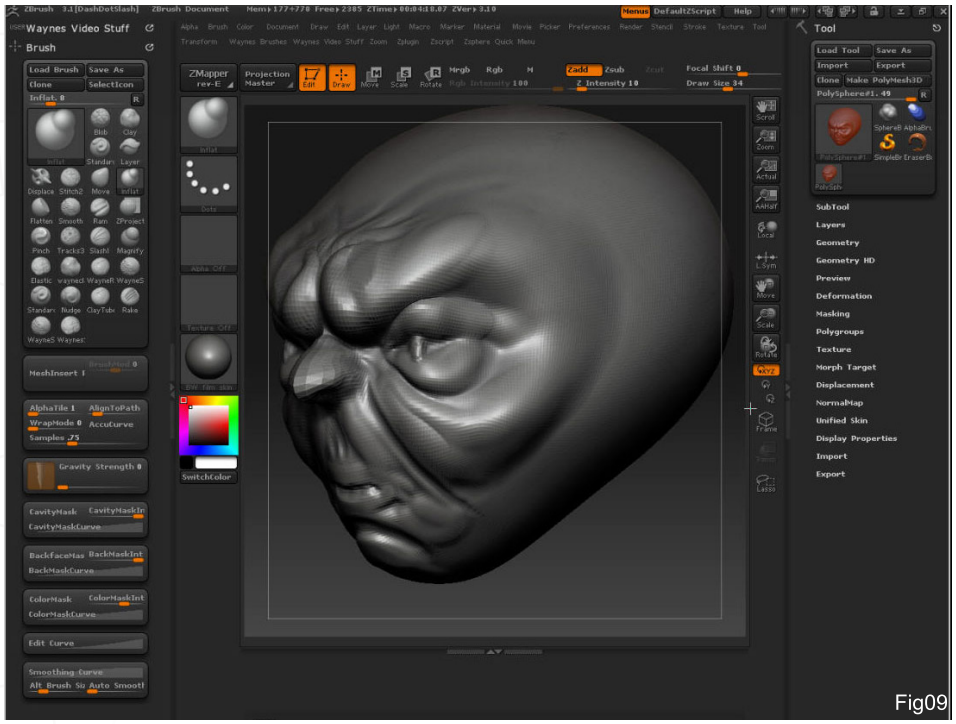

Fig06

So as you can see, after some more inflating and use of the clay brush, we are starting to get a face, or a least something that resembles one. At this stage these could be anything - it could turn into either a monster or a human. At this point is when I start to use the move brush at a large size in order to change the shape of the sphere into a more pleasing head shape. Please bear in mind that the shape of the head will dictate in many ways where you go sculpture wise with this head (Fig07 - 08).

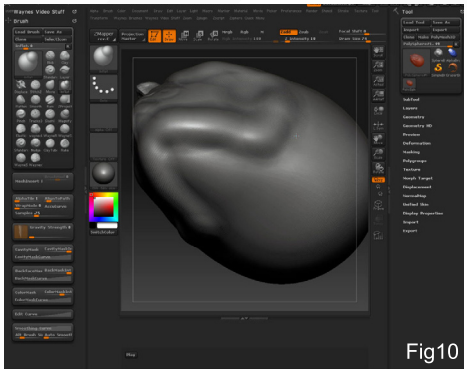

Fig07


Fig08

To try and get the head to look a little more interesting, at this point you can start to add major forms of things such as the eye bags. I will also start to pull the shape of things, like the corners of the eyes and nose and the bridge of the nose, into a more pleasing character shape. It is also around now that I start to check proportions of the face and move the cheekbones into position. Cheekbones and their position are really important as they do help to make more believable characters. Also, take note that the front of face is not flat but more like to V shape, as this is a very common mistake made by beginners. So if your head sculpts when starting out always looked as though they had been hit in the head with a shovel, you now know the solution to that problem (Fig09).


Fig09

I should also mention that if you make speed sculpts of the human head, you are going to want to look at the human face and the shapes that make it up in detail, and know them well. This is the foundation of sculpting; without the understanding of the interplay of form sculpting,


Fig10

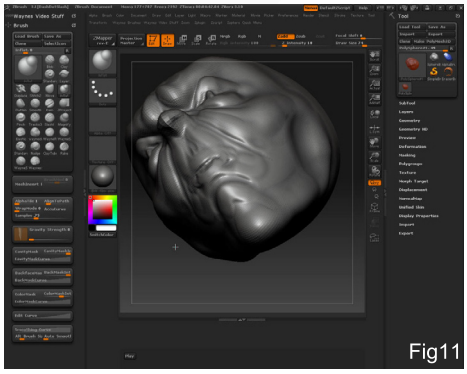

Fig11

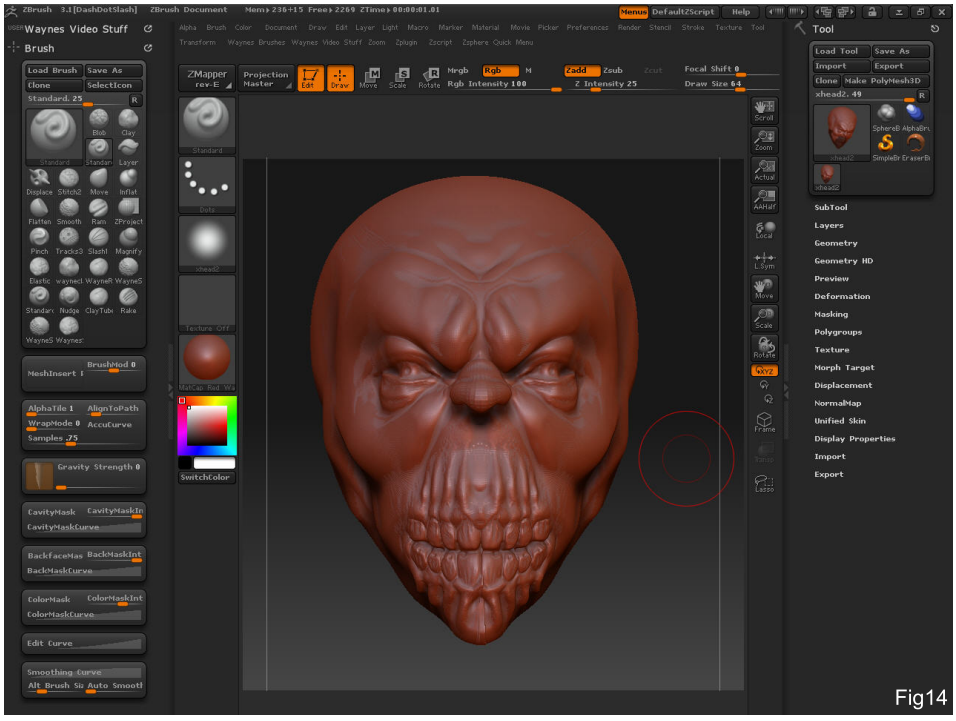

Fig12

it will always be an uphill struggle. Whilst very basic anatomy can be 'picked up along the way' as you develop, I do strongly suggest that you make time to study it (Fig10 - 11).

As you can see, we are now moving on to the medium resolution detail, such as the wrinkles around the eyes and those on the forehead. Using the inflate brush on these wrinkles, or rather between them, we can make them look a little better. It's also a good idea to use the smooth brush at each edge of your wrinkles, as this helps them to look a little less harsh (Fig12).

Then, by using the rake brush on the eye bags and then smoothing, we can get a rather interesting texture that we can later develop. It is often the imperfections in your sculpture at


Fig13


Fig14

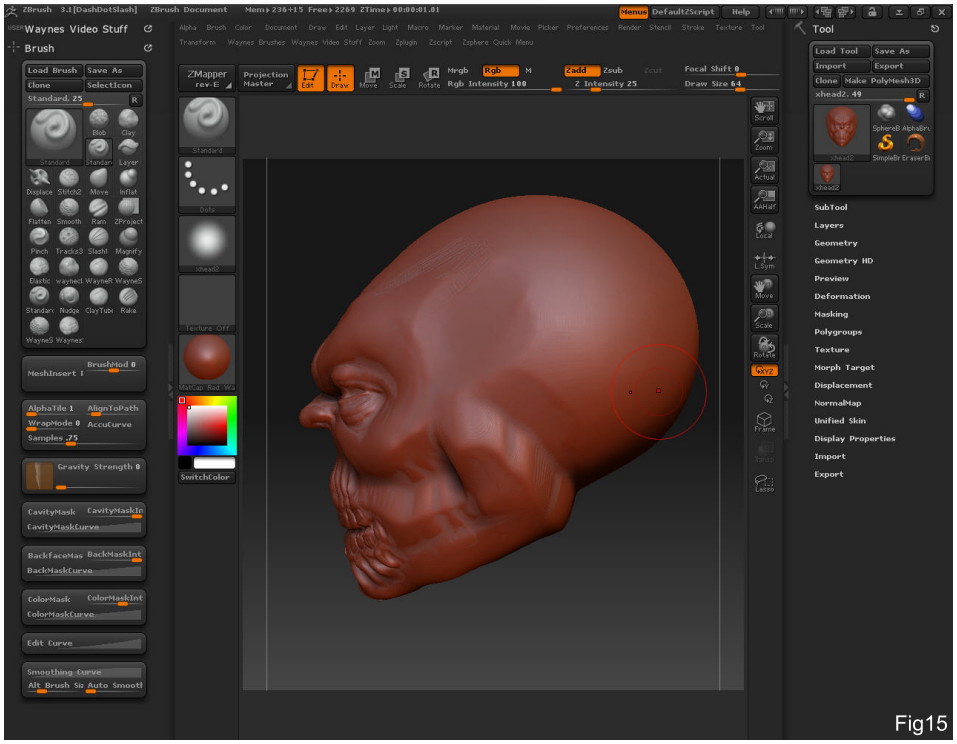
this stage that influences its direction later on. Notice as well that I have added some thickness to the upper and lower lids in order to give them a better sense of weight. I also start now to correct the pupils and carve out from behind them. This way of doing the eyes is a personal choice and one of many ways that I use. I chose this method in this case as it reflects light well and creates just the right amount of shadows (Fig13).

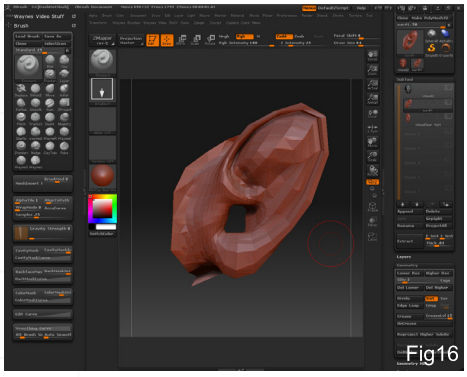
As you can now see, I decided to change the mouth at this stage and sculpted some teeth, as though they were growing directly out of the face with the gums acting as lips, as I thought this fitted the design better. Again, don't worry about changing your direction at this stage as it can often result in a much better sculpture if

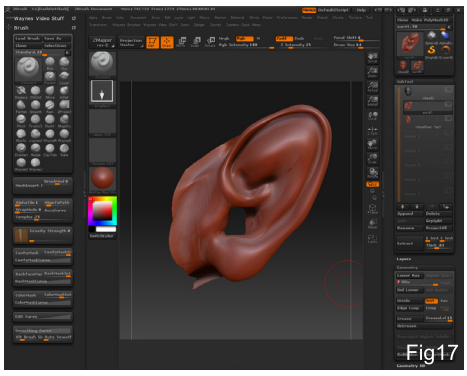
you improve things as you go along! The move brush was also used to pull the chin down just a little. Also take careful note of the angle of the jaw, as this is important (Fig14 - 15).

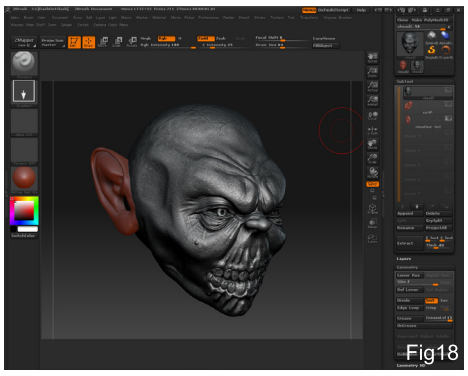
Using ZBrush's mesh extraction, I extracted a small area of geometry to sculpt into ears. Ears are something that will have to be covered in another article, and this is mainly because they are a pain in the backside to describe in writing and are usually much easier to describe as a movie (Fig16 - 17).

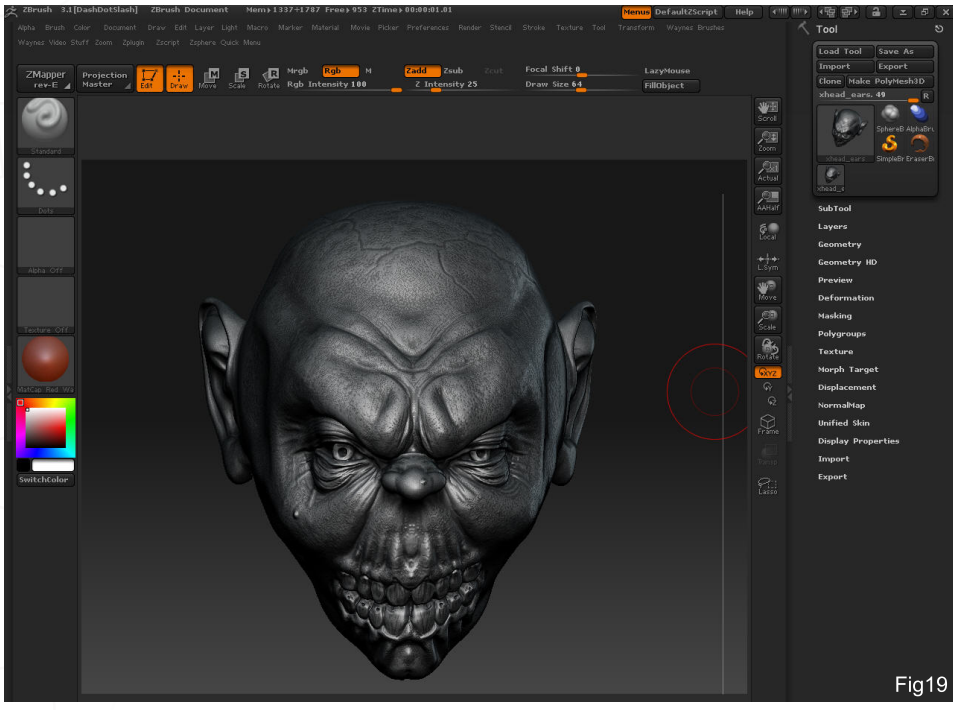
I then appended these ears to my main head mesh as a subtool; this was to help with their placement before inserting meshes directly into the head. This way it was rather easy to get the placement correct before cloning each ear


Fig15


Fig16


Fig17


Fig18

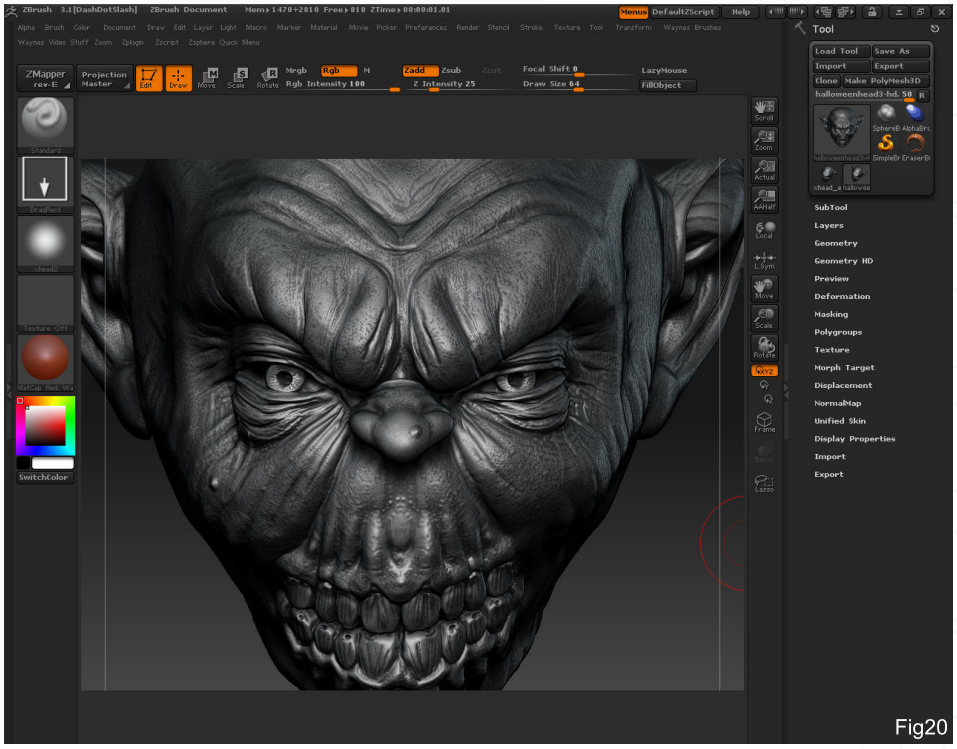

Fig19

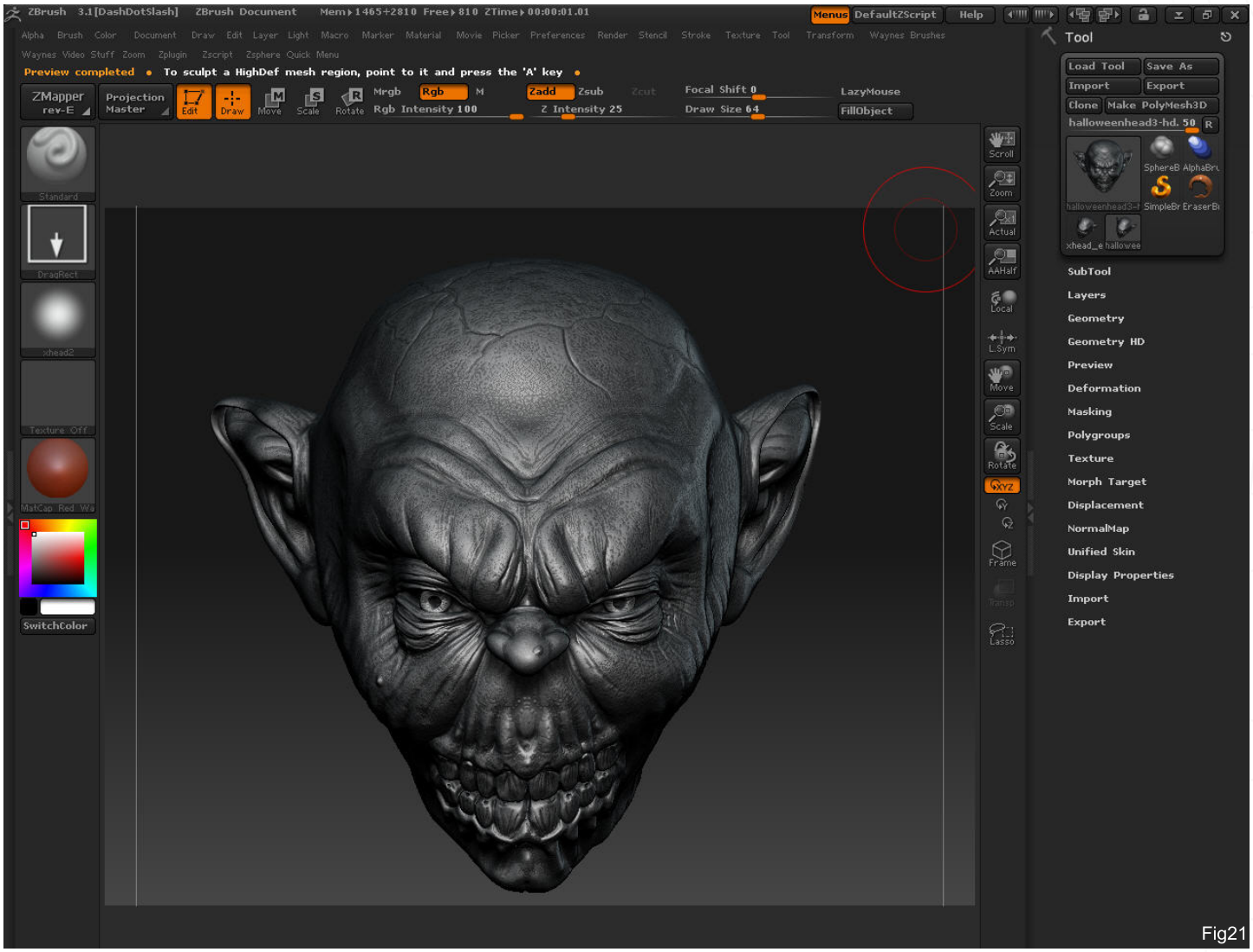
and re-importing using the insert button. A very important point about this is that you must have exactly the same amount of subdivision levels in your ears as in your head sculpt, or the mesh insert will not work. This also allows you to step up and down the subdivision levels as you work, without being constrained to just your highest level. I also decided to pull the ears outwards a little in order to improve the over all 'look' of the character (Fig18 - 20).

As you will also notice, I started to add some skin detail at this point using a very small default ZBrush Alpha and a scatter stroke, using both ZAdd and ZSub to give some variety of texture to the skin. As I approached the final stage of this particular sculpt, I took the displace brush with a very small Alpha and carved out some

small wrinkles and so on at various points in the face. Then, setting the same displace brush with a slightly larger Alpha set to ZAdd, I started to add the radial wrinkles around the eyes and those starting at bridge of the nose. After that, it was just a matter of basic tidying and tightening up to complete the digital sculpture of this head (Fig20).

So as you can see, we took this to a final speed sculpting stage in the space of a couple of hours, or less. Hopefully this article has explained in enough detail one of the many workflows to speed sculpting and will give you the bit of a head start (Fig21).


Fig20


Fig21



If you enjoyed this tutorial, you may also want to check out Wayne Robson's new 'Get Into ZBrush DVDs: http://www.kurvstudios.com/zbrush/

Wayne Robson

For more from this artist visit:

http://www.dashdotslash.net

Or contact:

wayne@dashdotslash.net


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COMPLETE GUIDE TO LIGHTING

PART 8 : PRODUCT SHOT LIGHTING

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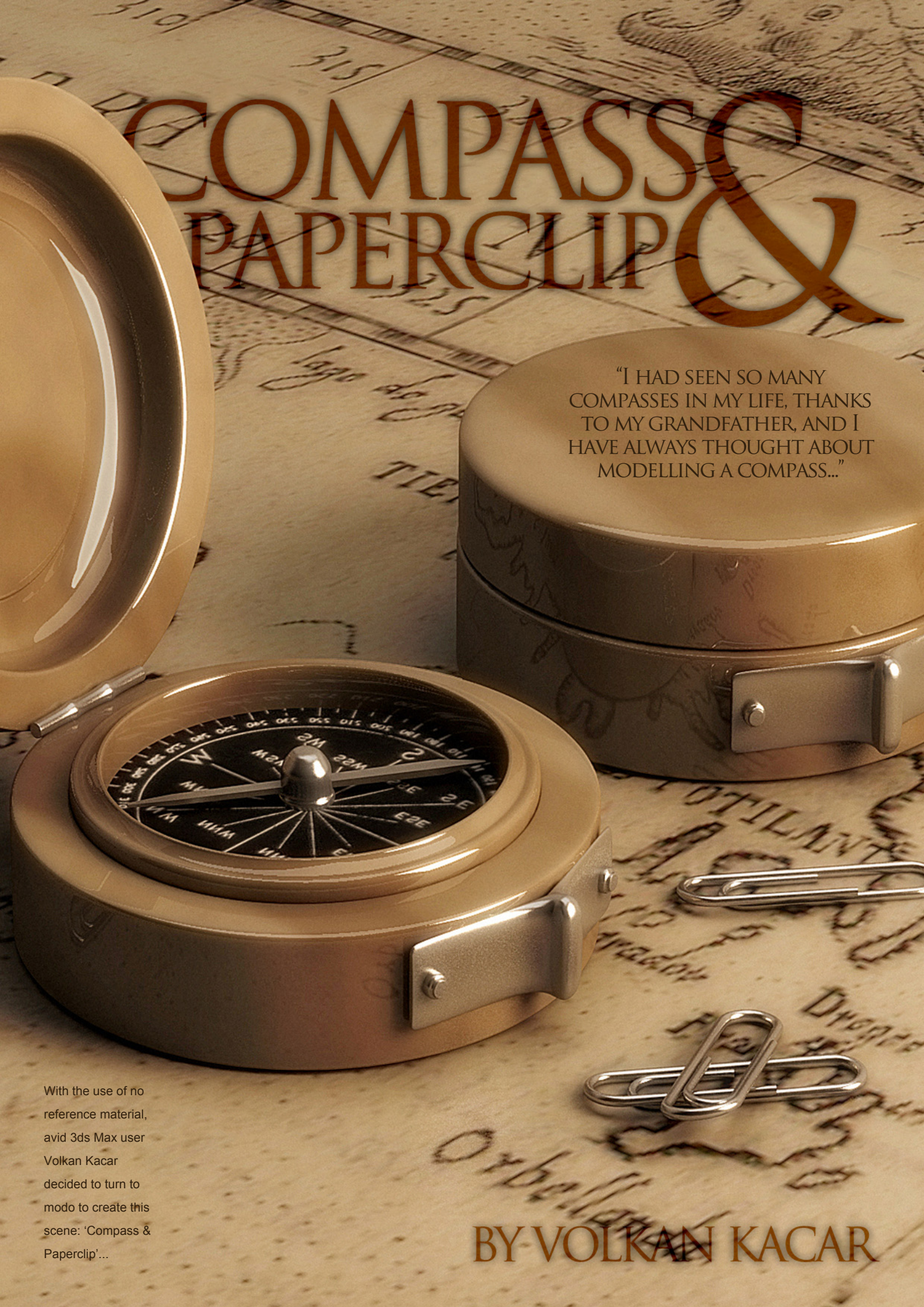
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COMPASS & PAPERCLIP
"I HAD SEEN SO MANY COMPASSES IN MY LIFE, THANKS TO MY GRANDFATHER, AND I HAVE ALWAYS THOUGHT ABOUT MODELLING A COMPASS..."
With the use of no reference material, avid 3ds Max user Volkan Kacar decided to turn to modo to create this scene: 'Compass & Paperclip'...
BY VOLKAN KACAR

COMPASS & PAPERCLIP

CREATED IN:

Modo

INTRODUCTION

Hi everybody, I am Volkan Kacar. I am glad to share the development process of my latest work, 'Compass and Paperclip' – I hope you like it!

CONCEPT

First of all, I would like to explain why I have chosen this particular scene to model, and why I have used Modo for the task. I had seen so many compasses in my life, thanks to my grandfather, and I have always thought about modelling a compass; however, because of my work I tended to forget about it, or I simply didn't have the time to do it. One day, one of my good friends, Cem Tezcan told me about Modo, with its advanced modelling tools. So I have now

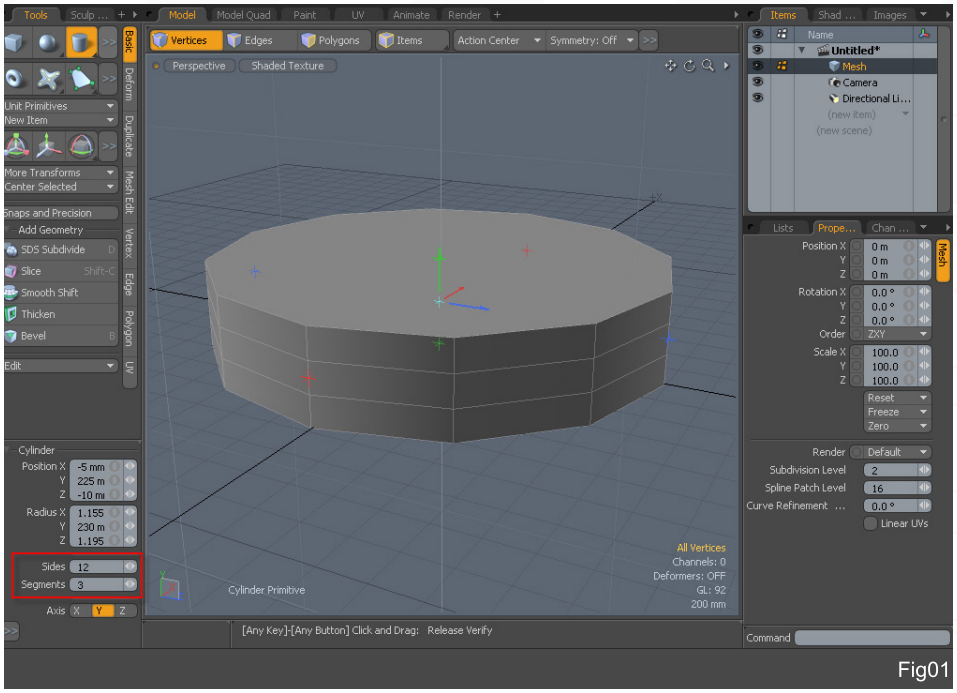


Fig01

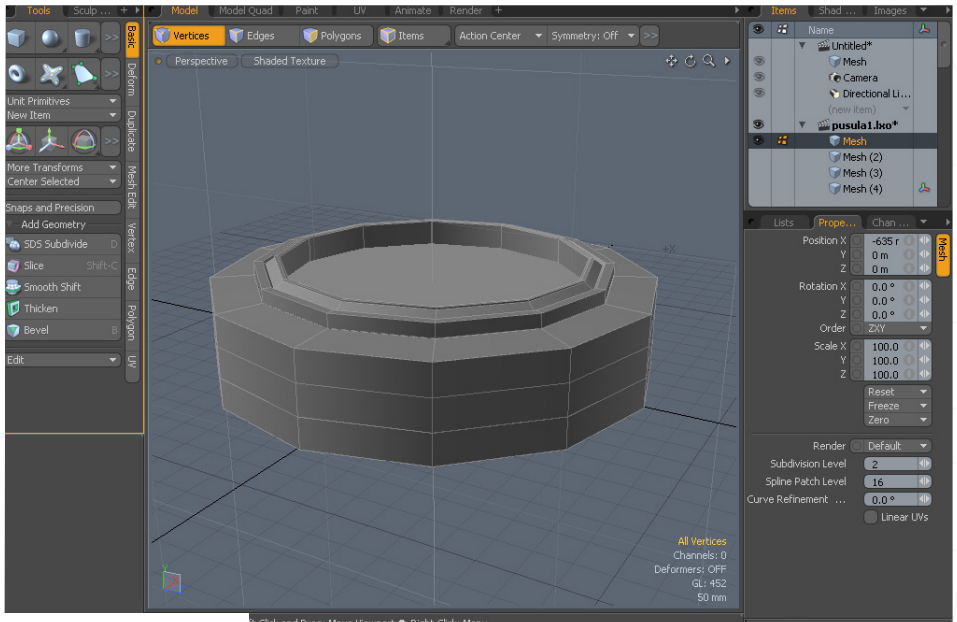


Fig02

started studying Modo for modelling; its interface never bores the user whilst modelling, and its shortcut keys are all in fitting. I have been a 3ds Max user for 7 years now and yet decided to make this particular scene with Modo, rather than 3ds Max. My 'Compass & Paperclip' work became the first serious work that I have made with Modo. But on the other hand, I haven't abandoned the very powerful 3ds Max – I want to use both 3ds Max and Modo in my future works.

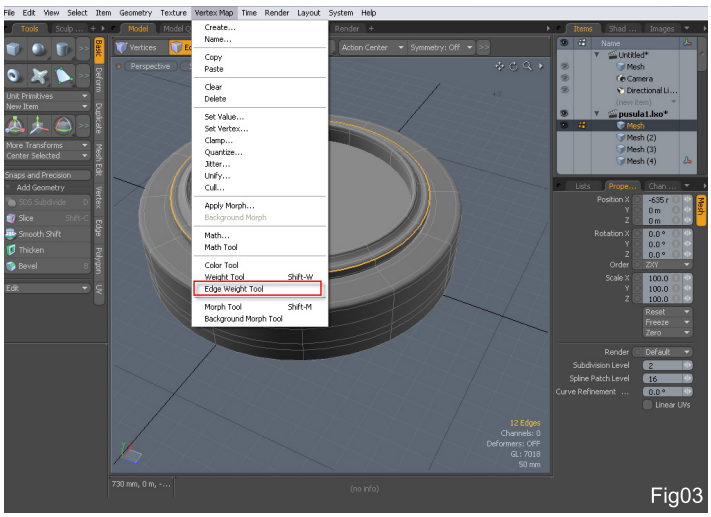


Fig03

Now, you may understand why I didn't use any reference images for this piece because, as I mentioned before, I have seen so many compasses in my lifetime that I really didn't need to search for any reference photos,

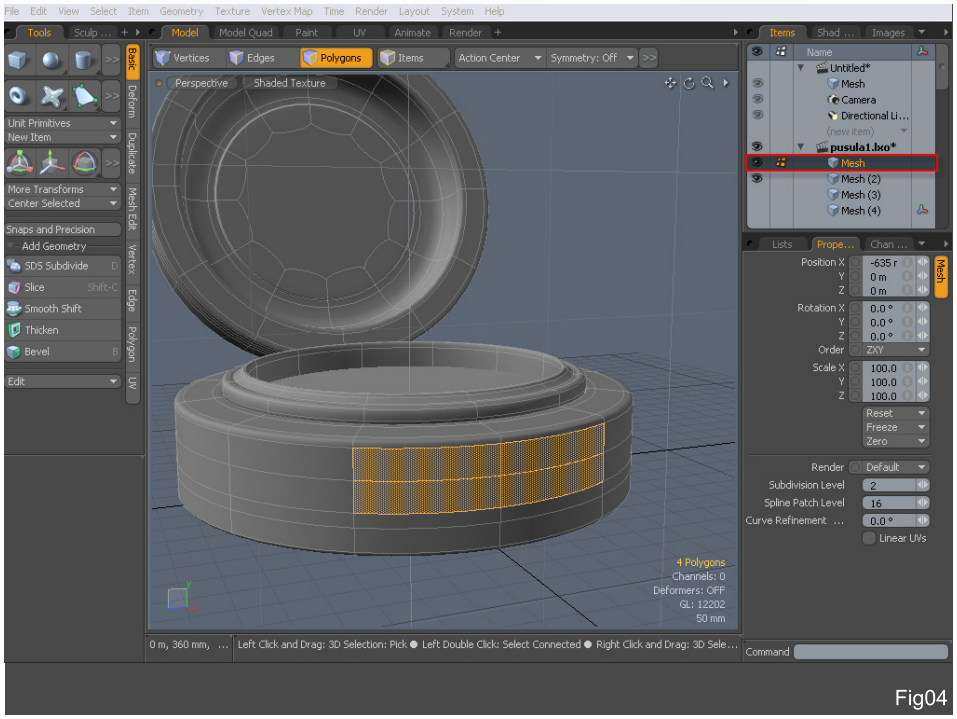
and I believe that was more like improvisation for me.

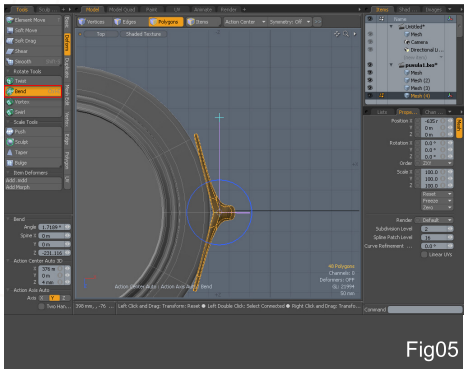
Right, so let's get on to the work now!

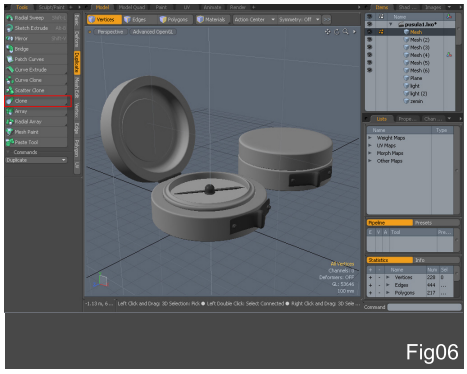
MODELLING THE COMPASS

I didn't use any reference images in my work; I simply started by adding a cylinder with a low number of segments into scene - I'll smooth the mesh later. This is the reason for using a cylinder with a low number of segments, as cylinders with a high number of segments can slow down the software unnecessarily (Fig01).

I then switched to Poly mode and modelled easily using the Bevel function (the keyboard shortcut for Bevel is "B"). The shortcuts in Modo are what make it a much stronger programme (Fig02).


Fig04


Fig05

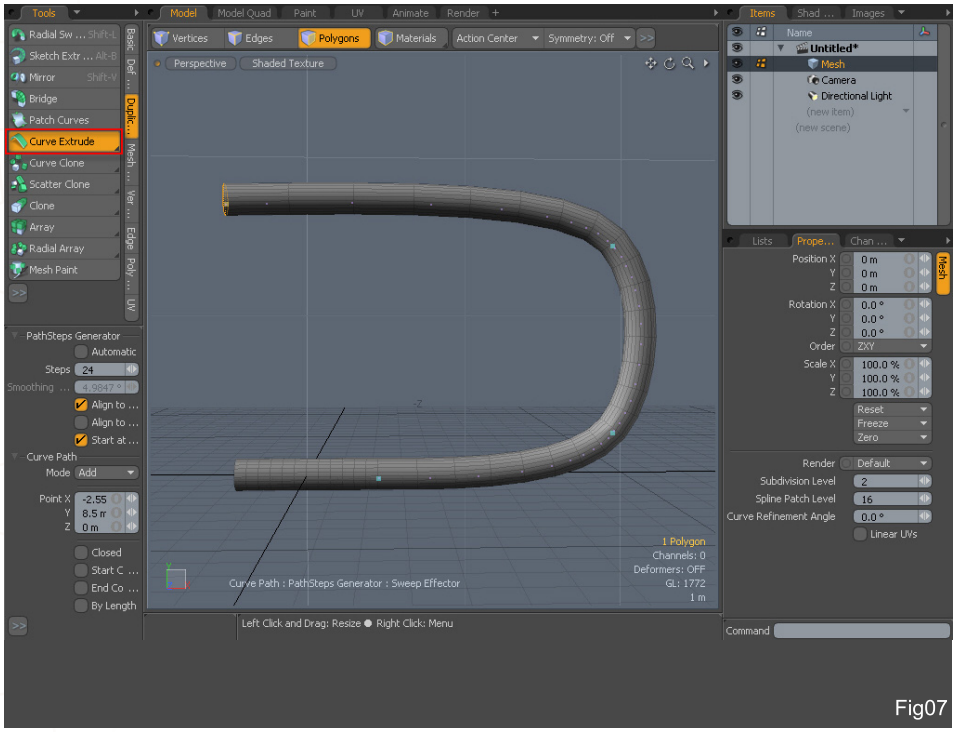

Fig06

Afterwards, I made my model smoother by using the Smooth tool (the shortcut for this is the Tab key). Some edges however should be sharper than others, and there are a few ways to achieve this. I sharpened the edges that I wanted to sharpen with the Edge Weight tool (Fig03).

While modelling the metal accessory in front of the camera, I switched to Poly mode, selected the front faces, then copied them onto a new layer as a different object using the Ctrl + C shortcut (Fig04).

I then bent the model using Bend Deform and finished the accessory using Bevel plus Subdivision (Fig05).

At this point, the compass object was complete, but I also needed a compass with its lid closed. To do this, I used the Duplicate Clone function and fixed it with Rotate – this way I had a compass with a closed lid (Fig06).


Fig07

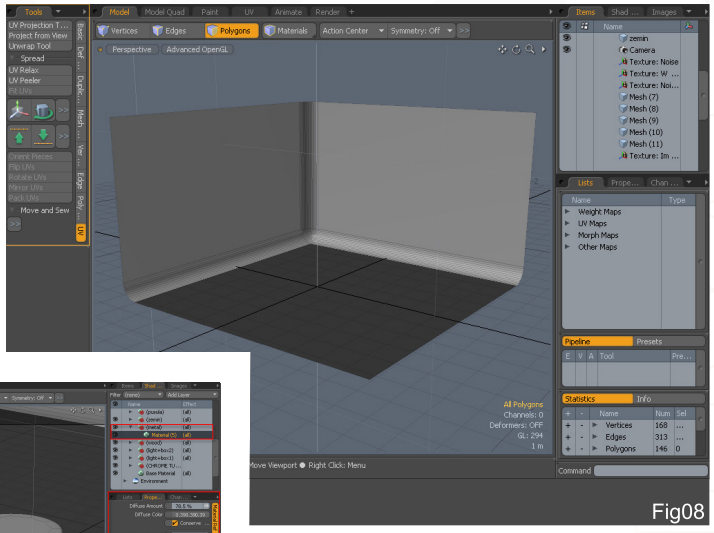
MODELLING THE PAPERCLIP

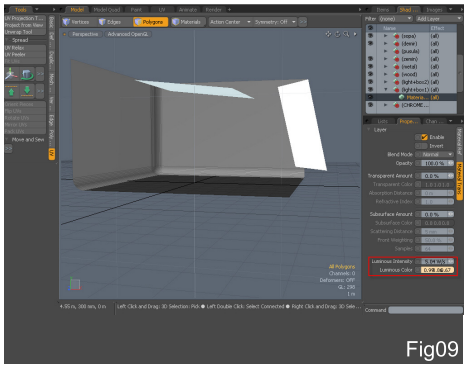
Now it's time to explain the paperclip object. To be honest, modelling this object was quite easy.

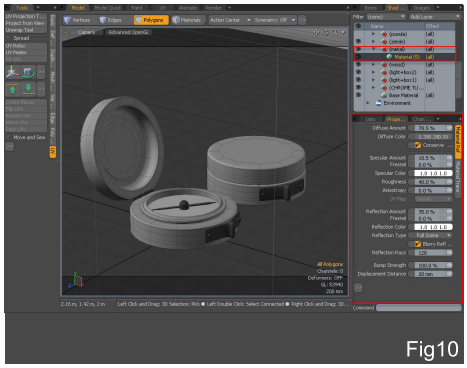
First, I started by adding a cylinder into the scene. Then, in Poly mode, I selected the face at the front and modelled my paperclip with the help of the Duplicate Curve Extrude function (Fig07).

TEXTURING AND RENDERING

To achieve a good render, I first had to create a studio environment. For the first step, I made a plane and lifted the edges with the Extend function (the shortcut key for this is Z). I then bevelled (B) the borders (Fig08).


Fig08


Fig09


Fig10

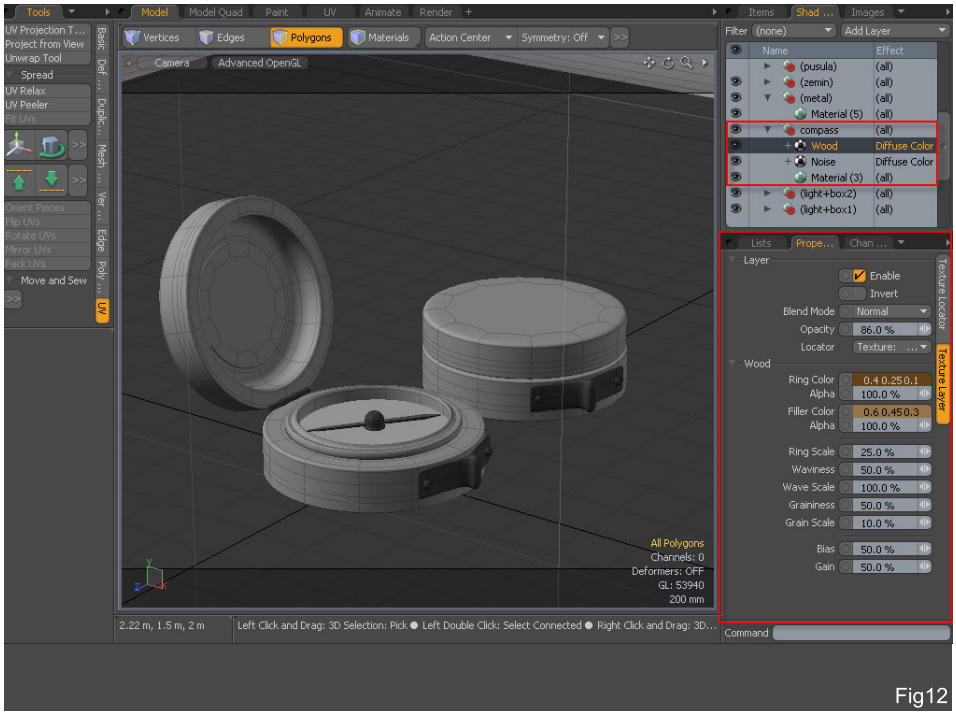
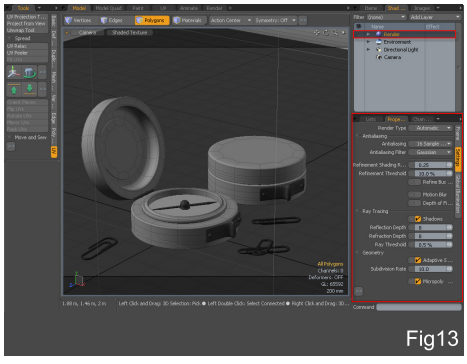

Fig12

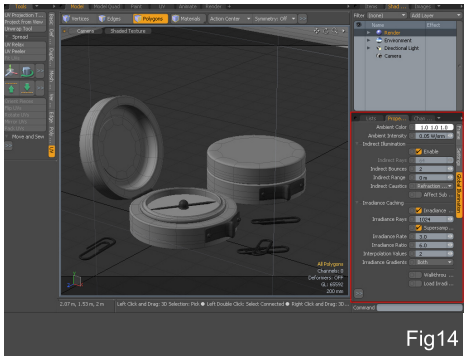

Fig11

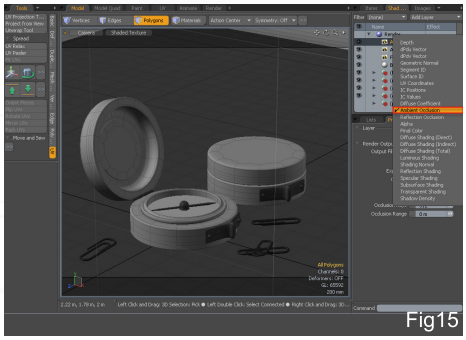
I then added two planes, which I aimed to use as light cards. In my opinion, for this type of scene this lighting method achieves more realism than other approaches can. I then gave a material name to the light cards that I wanted to use as the light, for example “light_box”. I switched to the Shader tree, enabled Luminous Intensity and set the colour of the light to Luminous Color (Fig09).

I prepared textures of objects by giving a material name to each object, switched to the Shader tree, and prepared their textures. I used the layer system in the Shader tree. The compass object used wood and noise materials, and for the ground I used an old map texture. For me, preparing textures in Modo is always fun (Fig10 - 12).

I made the best configurations in order to achieve a good render. The Modo rendering system is really fast and high quality. For this image, the render time was 9 minutes, which is


Fig13

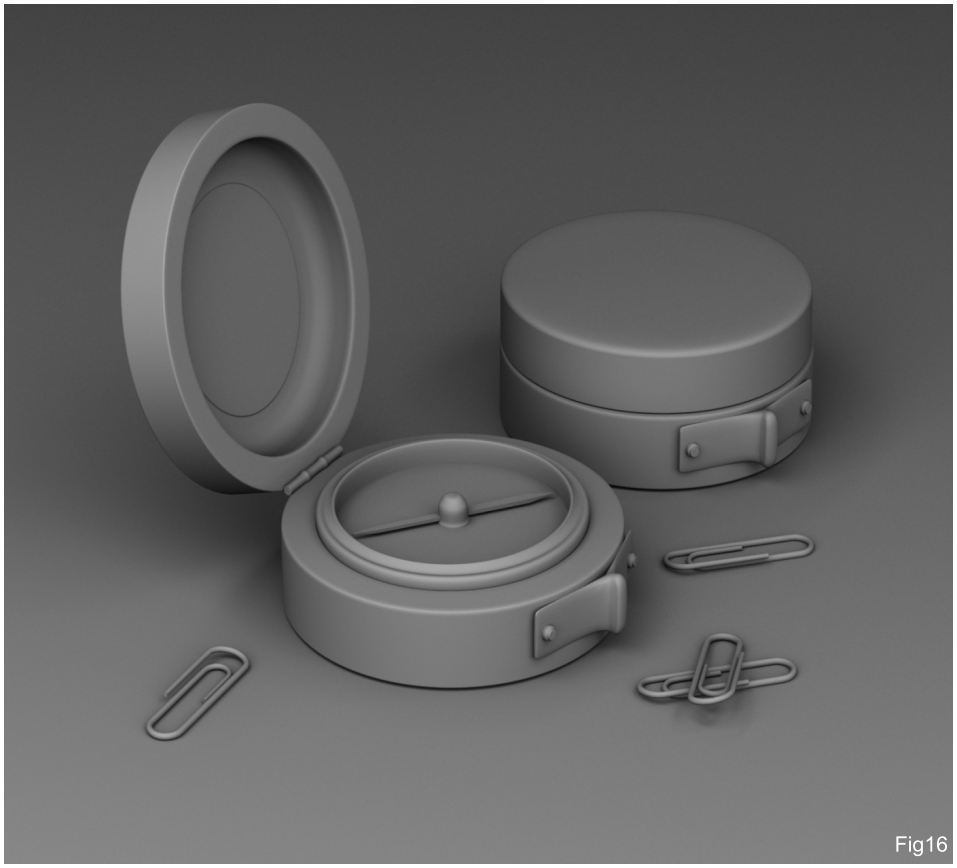

Fig14


Fig15

pretty short for a high quality render such as this (Fig13 - 14).

After rendering, I then added a new layer and selected Render Output, and from Effects I selected Ambient Occlusion in order to later go into Photoshop to do some retouching of the image (Fig15 - 16).

After some final tweaks in Photoshop, my work was complete (see image below).


Fig16

CONCLUSION:

The scene is complete, but there were some issues that I encountered on several occasions during the rendering phase. The reason is simple: when I started learning Modo, I studied modelling with it, but I didn't have the chance to look over rendering and texturing properties much. So whilst I was creating this scene I spent 3 or 4 days making test renders simultaneously. That was the real deal for me for a short time, but I believe I have created a visually good scene in the image. It is possible for me to also use these compasses in a future project, and I can already say that it will be a more complex scene.



VOLKAN KACAR

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blur_maxx@yahoo.com.tr



drum kit 101

by Daniel Anderson

Keen drummer and 3D modeller, Daniel Anderson, takes us through the creation of his 'Drum Kit 101' image which featured in Issue 25 of 3DCreative magazine. Daniel also shows us how he used 3DTotal Textures Vol.1: R2 DVD for the texturing stage...

CREATED IN:

3ds Max, V-Ray, CorelPaintshop Pro

INTRODUCTION:

This was a personal project that I went ahead with; I've been using 3ds Max for two years, and more recently I've started using more than just Mental Ray. For this project, I decided to use V-Ray, simply for its fast calculations and realistic results. Plus it's easy as hell to use once your passed rendering a million spheres just because you can and just for the hell of it!

Now, this is my first ever tutorial so be kind… I will be using textures from the 3DTotal Textures V1: R2 DVD Collection. So let's get on with it!

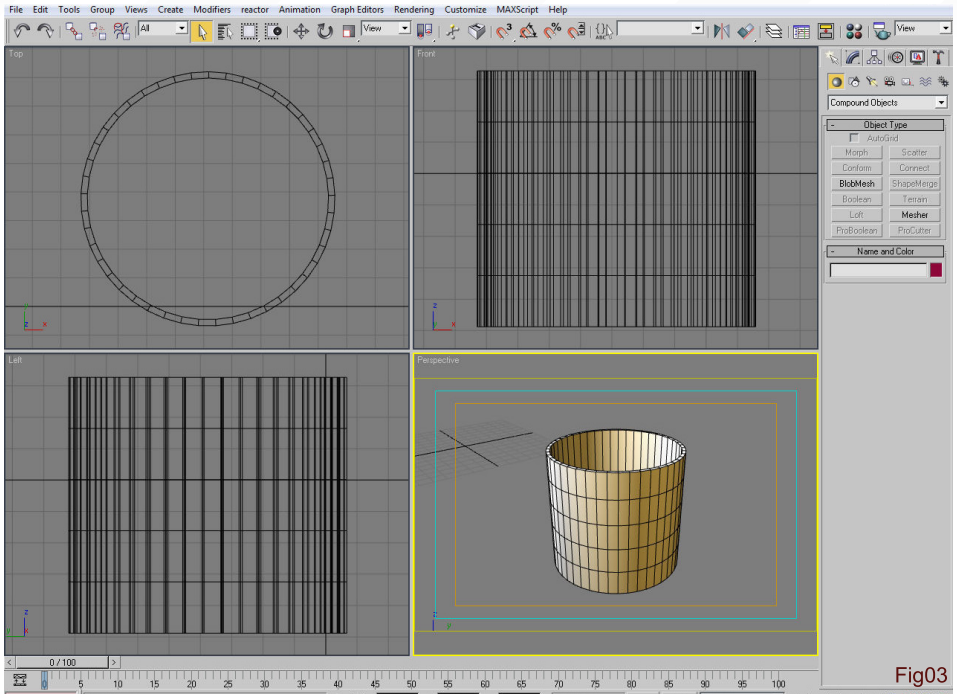
CONCEPT

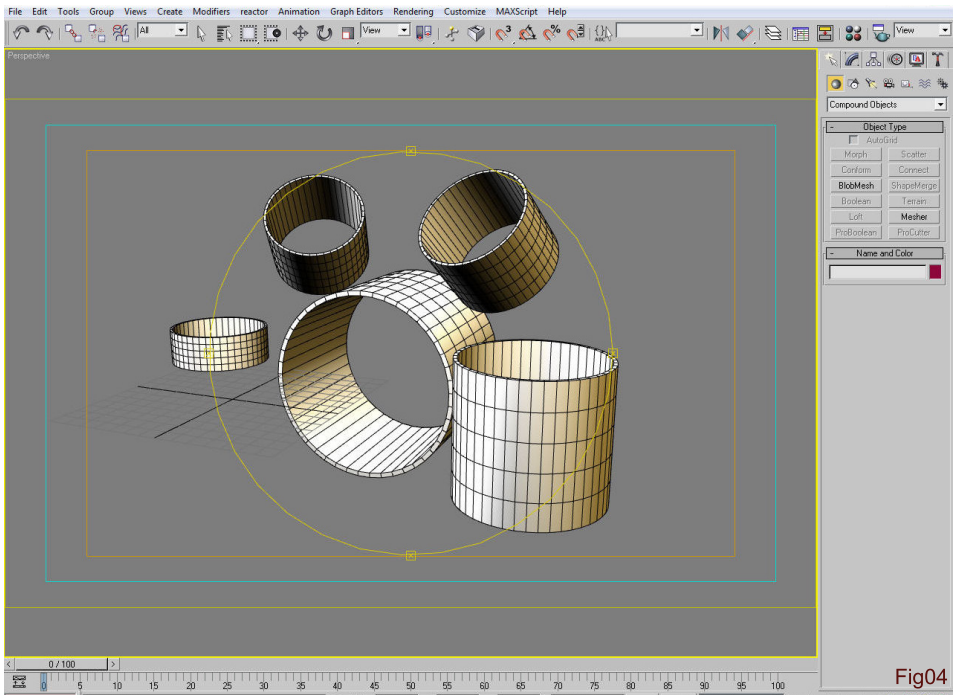
First of all, I had to come up with a concept that I was capable of. I'm a drummer and know drums like the back of my hand, but I still used reference images for help. I used a photograph of my own drum kit (Fig01), plus a reference image which I found on the Internet (Fig02).


Fig01



Fig02


Fig03


Fig04

MODELLING

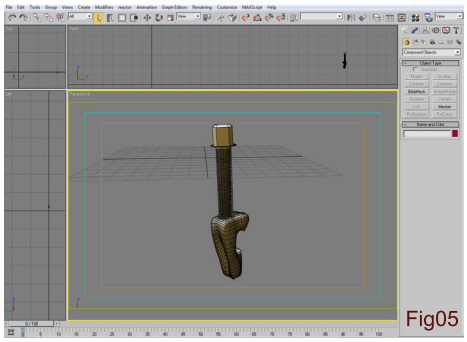
I started off with a simple cylinder, five segments in height. I created a cylinder for each of the pieces of the drum kit, so that was 5 cylinders in total. I then created another cylinder which was much skinnier and taller, and placed it in the centre. I went to Create Compound Objects and ProBoolean (if you're using a version of Max 8 or lower, use Boolean). I then had the shell of a drum, then all I had to do was to instance it five times and re-size them – there's no point in actually making five separate pieces for a model like this (Fig03 & 04).

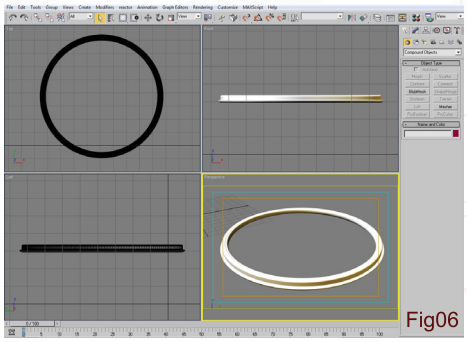
DETAILS

Next to be modelled were the details of the kit. All the fixtures are the same on a drum kit

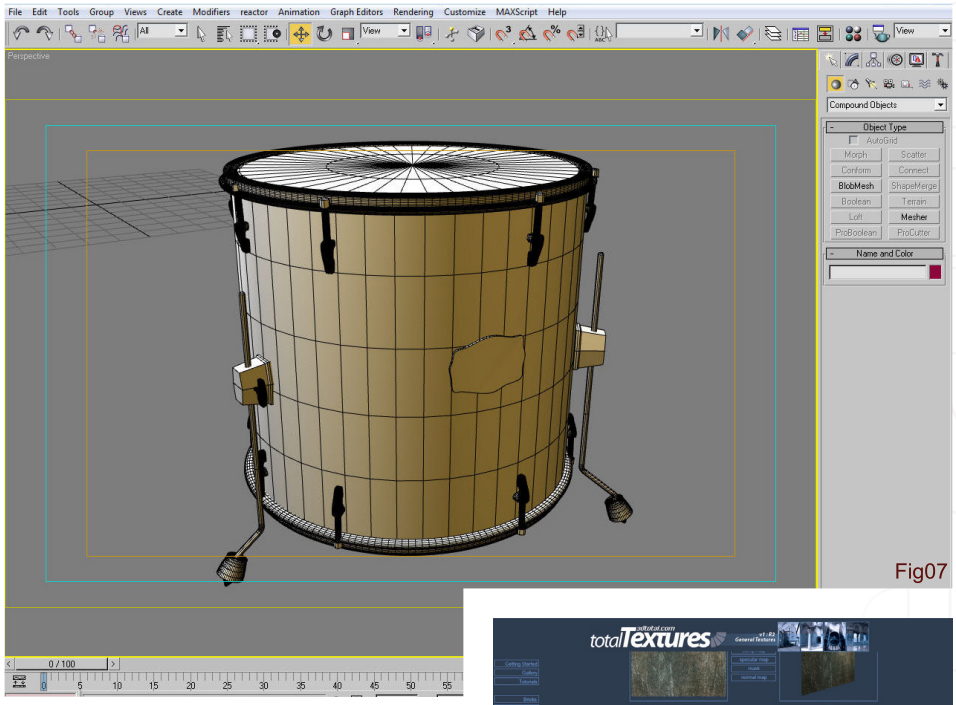
- screws, bolts and so on, so all I had to do was to make them once and duplicate them for as many as required!

I kept duplicating the required parts until I achieved what can be seen in Fig05, 06 and 07. Don't skimp on the details as these are what really make an image!


Fig05


Fig06

I continued with the same process until my drum kit took shape and looked like what can be seen in Fig08.


Fig07

TEXTURING

Then came the fun part: texturing! For this part, I used 3DTotal Textures V1: R2 DVD Collection (Fig09). I only used the colour and bump because this was all that I required for this specific task. The rest comes under the heading of 'materials', which I'll cover later on…

So, I opened up Paintshop and the first thing I did was to open the wood texture (Fig10), then I created a new layer and painted over it in a nice shade of red (Fig11). I then darkened it a little by adjusting the level of Brightness for a more realistic, wooden feel (Fig12). I left the bump as it was (the bump was already created on the Total Textures DVD).

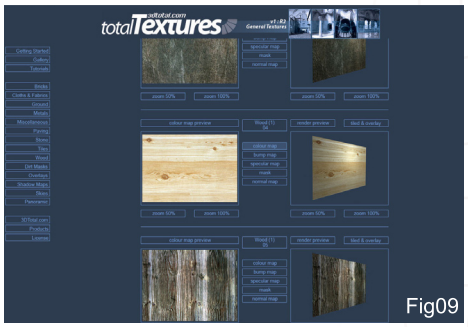
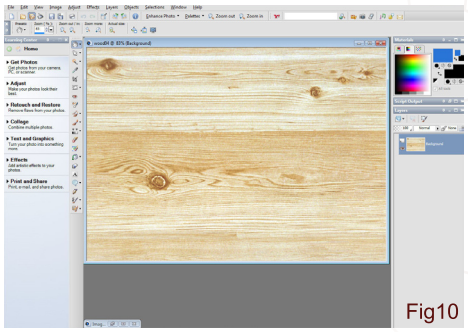
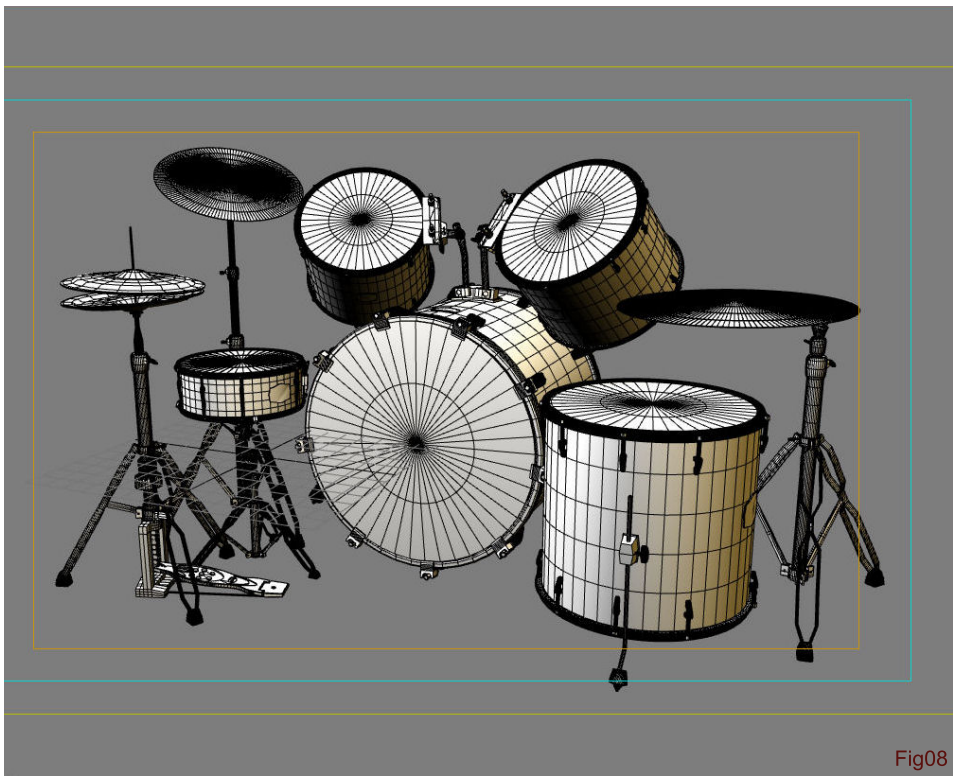
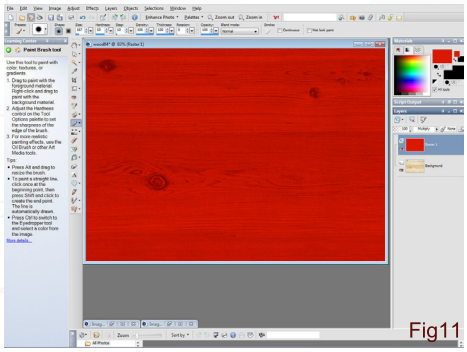


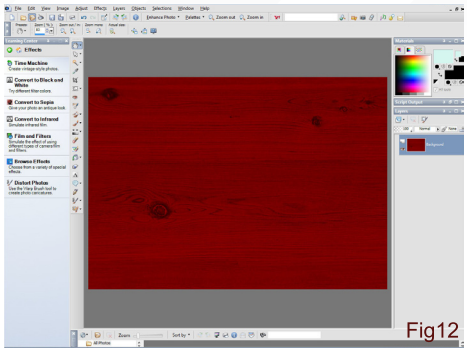
Fig09

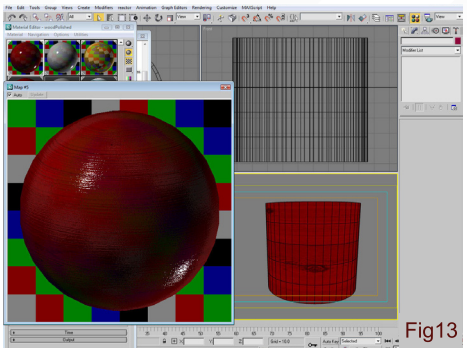

Fig10


Fig08

I was then ready to apply the texture to the drums...


Fig11

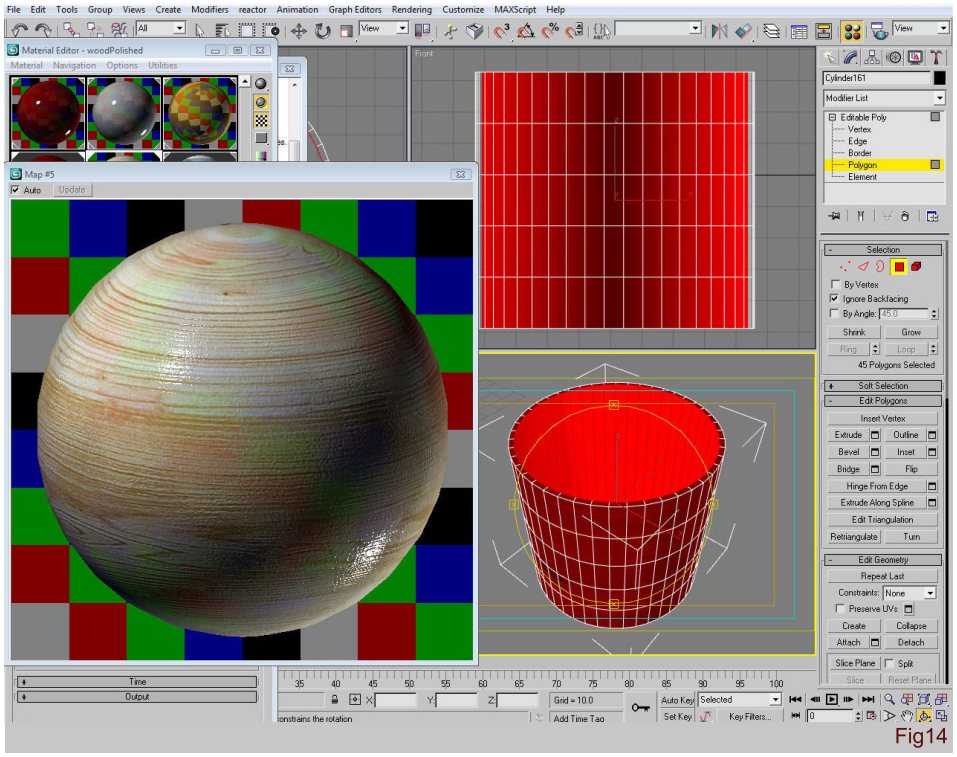

Fig12


Fig13

So I had three colours, the original wooden panel texture, the red one, and then the bump. I wanted to apply the red texture first of all to the whole drum (Fig13). To do this, I went into Edit Poly mode and selected all of the faces inside the drum kit, then applied the wooden panel texture. Only the outside shell was coated red (Fig14), as that gave a 'real-life' effect to the drum kit. It's all of these extra little texture details like this that convince your brain into believing images!

Rendering

With the drum kit textured, it was then time to render… I set up my scene (I'm not going to tell you how to render using my rendering configurations as that'll take all the fun out of having your own rendering setup!) by simply messing around with the settings (Fig15). The final render can be seen in the image, Fig16.


Fig14

Post Production

And there you go! A fully textured drum kit in a studio environment, ready to be rendered (Fig17). I hope this tutorial has been helpful for you, and I'd love to hear from anyone with any questions or feedback, so please contact me! Keep modelling!!

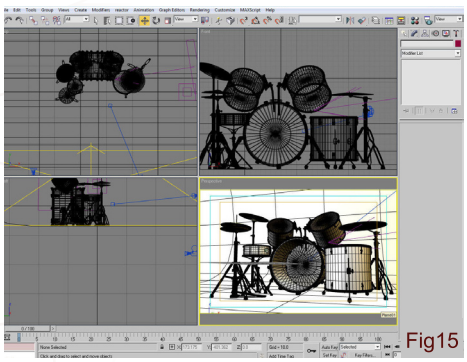

Fig15


Fig16

Daniel Anderson

For more information, contact the artist:

Thevoxmusic1@hotmail.com





Fig17

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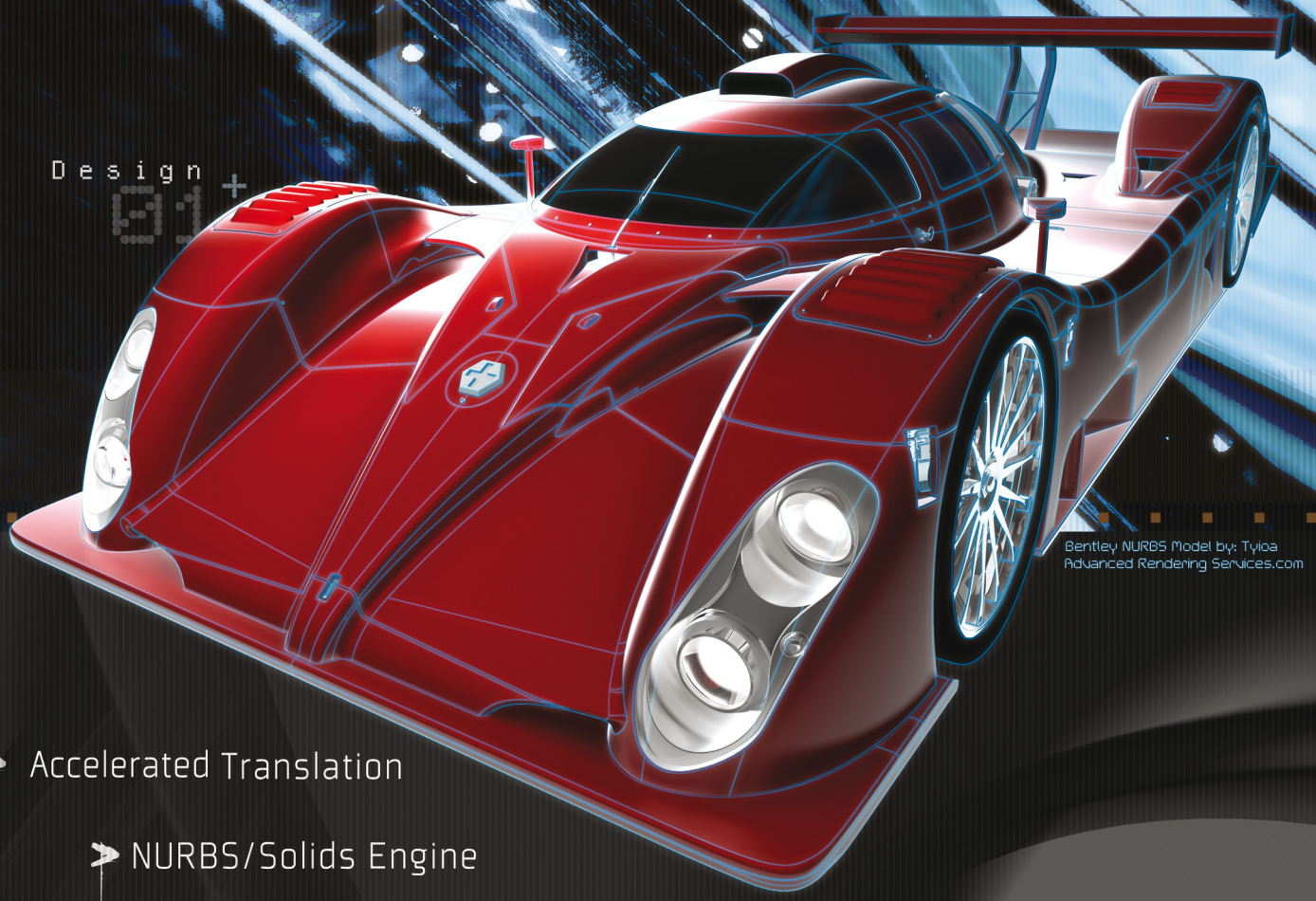
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VOLUME 2



With the release of 3DTotal's new book, 'Digital Art Masters: Volume 2', we have some exclusive chapters for you...

The book is more than just an artwork book, as not only does it feature full-colour, full-page images, but each artist has described in detail the creation process behind each published artwork, in their own words, especially for this book.

This month we feature:

'Bad To The Bone'
by Kosta Atanasov



The following shots of the ‘Bad To The Bone’ book pages are featured here in full-resolution and can be read by zooming in!



© Kosta Atanasov

Bad to the Bone

By Kosta Atanasov



Introduction

This is Bad - the main character for my upcoming short 3D movie, named *Bad to the Bone*. I needed a movie project for my graduation at the university, and I needed something short and easily done – I was amazed when I found out that the idea was under my very nose, because it was something I've always wanted to say. The idea behind the movie-to-be is that bikers, though looking mean with all the metal skulls, dusty black leathers and spikes, are actually nice, normal people – that not everything that is gold glitters, and vice versa. My favorite rock band – Bon Jovi – has put the same thing brilliantly in a song, named “Good guys don’t always wear white” – it basically says that you should not judge a book by its cover. I've been a biker myself for quite a while, and I have a lot of biker friends that look exactly like Bad – when you meet them on the street, they might look all scary and mean – which is the total opposite of what they actually are; it's just that this is the lifestyle that fits them. The mean looks are just a mask, a protection from the other people, who more often than not don't approve anyone else's right to be different, unique, and are not free from prejudice. We live in an outdated world conditioning us with a lot of dogmas that are not necessarily true – so we have to rely on ourselves to find the truth behind it, about what's good and what's bad. So here's some more info about who I think Bad is: “Bad is a true old school biker. A lone wolf, he loves to ride alone – he doesn't need anyone else. On his scarred face you can rarely see emotion – the one thing that changes in his stone expression is the slow, threatening movement of the heavy eyebrows, as they drop even lower over his squeezing eyes. He has the ultimate hardcore macho aura, and never, ever smiles. His passion for motorcycles and the smell of gasoline and burning tire can only be compared to the love of leather clothes and skulls, with which he decorates every possible thing – starting from his bike, the belt, the boots, the tattoos, to the rings on his hands; he LOVES skulls. Looking mean, acting tough, inside he is truly a nice guy – but he never allows others to know that. He is content with the world thinking that he is the “Bad and mean biker”. He doesn't show that he cares about anything, and doesn't let anything crack his stone-cold attitude. He is the personification of the word “Badass” – if there is a “Badass Biker Association”, Bad is its president”.

I spent quite a bit of time sketching and refining the character, the props, while thinking on the script in detail. When finally I came closest to what I was looking for, it was sketched with a ball pan on a piece of old yellowish paper, which I've used later as a reference point (Fig.01–04).



Fig.01

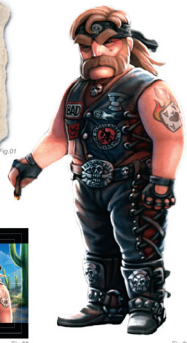


Fig.03



Fig.02



Fig.04

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The “Live fast – die young” tattoo I think is a nice touch, since Bad is obviously not young and just as obviously still alive. From all the concept designs I drew, the other tattoos I chose to use were “Old Skull” and the classic “Mum” heart. I also like how the “Badass Biker Association” patch turned out – a black ass (the donkey kind of) with evil red eyes riding a bicycle makes a nice pun; stuff like that is rarely noticed, but I really love to add detail of this kind in all my works (Fig.05).



Fig.05



Fig.06

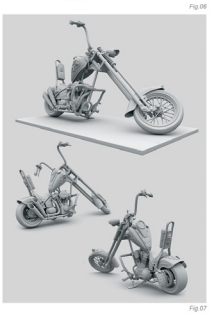


Fig.07

Modeling and Texturing

When I began the actual work, I used my standard pipeline: I model a low poly in 3D Studio Max, using simple poly modeling. Working on the cage, I actually keep track of how it looks when subdivided. Then I UVW unwrap the subdivided version (it's really easy on characters like that using pelt mapping), import it into ZBrush and detail it. The final textures I apply in Photoshop, and, also creating a bump map, use them to render the normal map. I import the mesh back into 3D Studio Max, and add a quick biped to put it into pose. To achieve the realistic look I render it with V-Ray, using HDRI lighting. To make it look like a small toy, I simply keep in mind that there should be no small details; all of them must get a little exaggerated. Same goes for the textures, and the camera DOF (rendered in Photoshop using an external plug-in). Stronger camera depth of field at shorter distances makes objects appear smaller (Fig.06).

Rendering

This version of the bike was face-lifted to look good exclusively for this render, initially planned for the cover of V-Ray Render 1.5. I had limited time to do it, so I mapped the bike's textures in camera projection mode, and actually used the full exported ZBrush geometry for the skulls. Since it would only be viewed from this angle and not in animation, no one would ever know the difference: it's hard to make compromises like this when you've been a perfectionist all your life, but this particular sacrifice is actually something you gain rather then lose. When you learn how to get past the unnecessary work you do for your own satisfaction and no one else will ever know about, you win the freedom to use your time for more stuff, bigger stuff, or both. As a whole, I really like how Bad's bike turned out; it fits perfectly the vision of the film I have – slightly exaggerated lines, scaled-up detail so stuff looks smaller, and realistic materials, render and lighting. Though I ride my motorcycle quite a lot, I do not know major things about how the engine works, which parts do what and so on. I know which hole the benzene should go into, I can bypass my gas pump on occasion, but that about does it. I wanted the motorcycle to look simplified, but convincing, so I had to put quite a bit of research to get the engine details right and get rid of the smaller ones. For the sake of clarity and easy animation I had to remove the cables of the front brake and the clutch – though they would look good on it and would certainly add dynamics, they would be extremely hard to animate and prove realistic in close-ups (Fig.07–09).

“Bad's bike is just like him – gotten over its mid age, with a classic, old school appearance. A little dusty, with slightly darkened chrome – a true biker's motorcycle, not the kind of bike a poser would ride on, but one for true riding, one who has seen lots and lots of miles and will see many more. The bike is kept in a condition to work flawlessly, and about the outer look – well, Bad doesn't care about that stuff. All covered with his favorite skulls, the bike is distinct and unique” (Fig.10–12).



Fig.08



Fig.09

Conclusion

If I have learned something from this movie project, it's not how to model, texture or render a cartoon character, but that if you aim for something really good and something serious, you have to learn to rely on other people as well rather than on yourself alone. Yeah, sometimes it can be hard, because other people are neither clones nor extensions of you and have different vision, take different decisions – they are themselves. That's why you have to learn to trust others and let yourself become a part of a bigger, more creative whole that will produce greater results which will further on have a greater effect. From the beginning of the project I discussed the script with friends and colleagues, professors at the university, and, offering their different points of view, I believe they helped me greatly improve it. I really hope to finish this movie some day, despite the lack of time, more serious ambitions and all. I believe I will, because there are no boundaries but those we set for ourselves. Best of luck to you all; I hope you find the spring of your artistic creativity and inspiration.



Fig.10

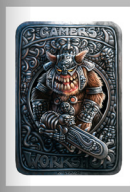


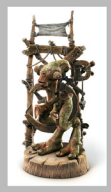
Fig.11



Fig.12

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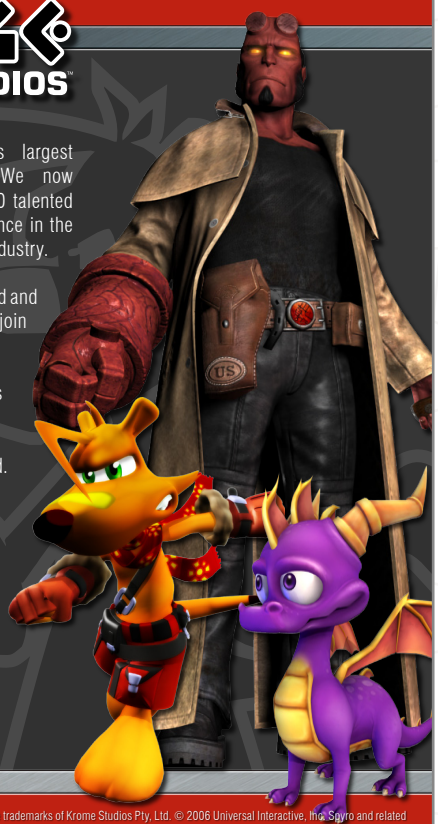
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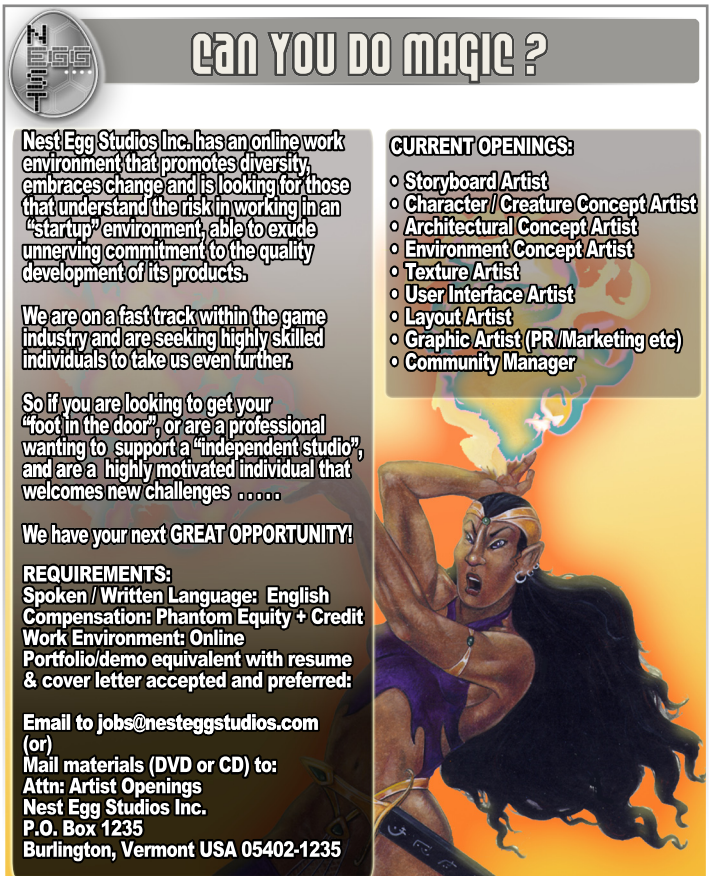
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Natural Exterior Lighting Sunny Afternoon

Issue 024 August 2007

Natural Exterior Lighting Twilight

Issue 026 October 2007

Natural Exterior Lighting Moonlight

Issue 026 October 2007

Artificial Interior Lighting Electrical

Issue 027 November 2007

Artificial Interior Lighting Candlelight

Issue 028 December 2007

Artificial Exterior Lighting Underwater

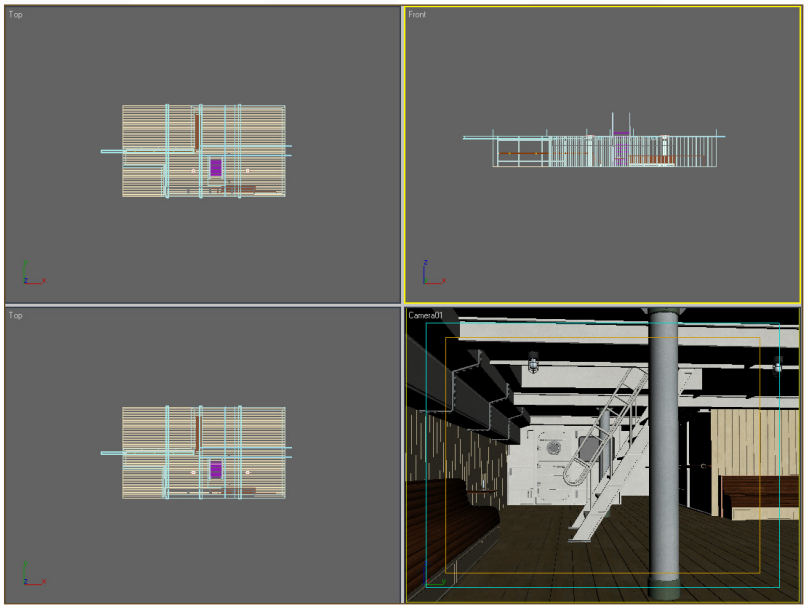
ENJOY...

Environmental Lighting Part 5 - Candlelight

This time we'll see how to light the ship cabin with some candles. Only one candle will be visibile, on the left of the room; the other two will just light the scene and cast shadows, but will be out of view (one on the right, and one in the back of the room).

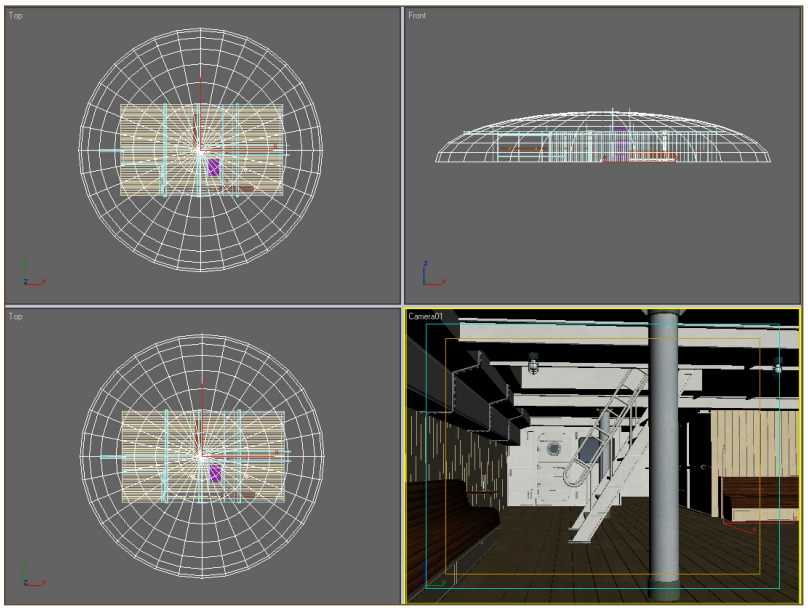
01. Open the 3DENV_Part5_Candle_Start.max scene file. (Fig01)

Fig 01



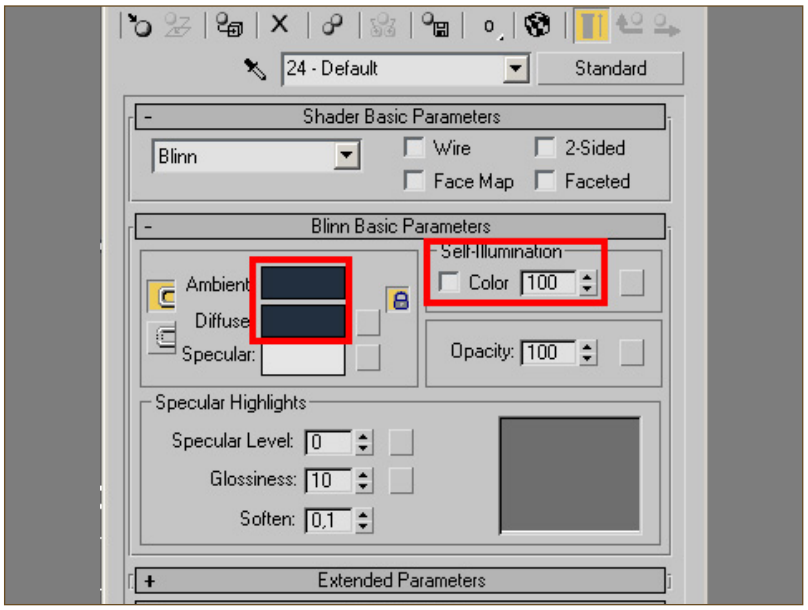
02. First of all, we need to create a soft, ambient lighting for our scene, which will resemble a night time situation. Create a polygonal sphere which surrounds all the scene. Select the lowe half of the sphere and delete it. Select all the remaining polygons and flip them to make them point inward. (Fig02)

Fig 02



03. Open the Mat. Editor and create a new, self-illuminated blueish material. Assign it to the sphere. (Fig03)

Fig 03



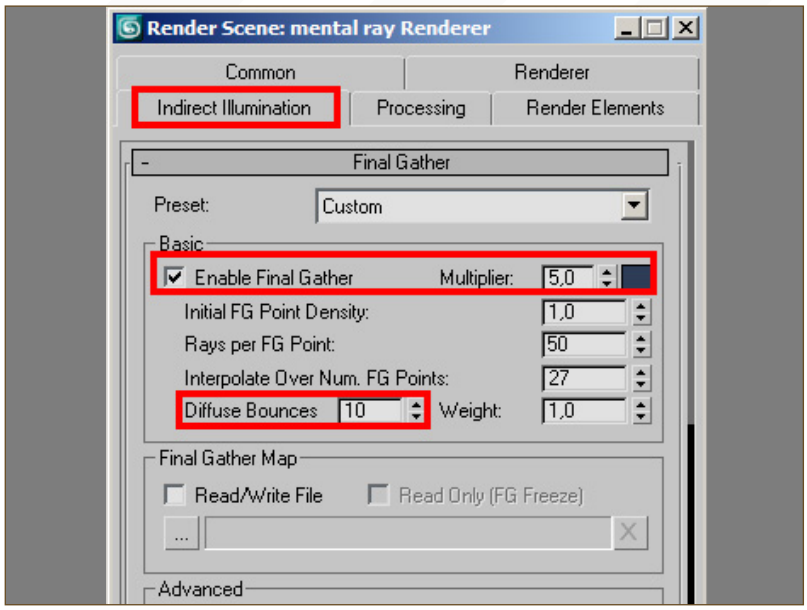


Fig 04

04. Set Mental Ray as main renderer, and open the Rendering panel. Switch to the Indirect Illumination tab, enable Final Gather and set the Multiplier to 5. Also, set the Multiplier color to a dark blue and the Bounces to 10. (Fig4)

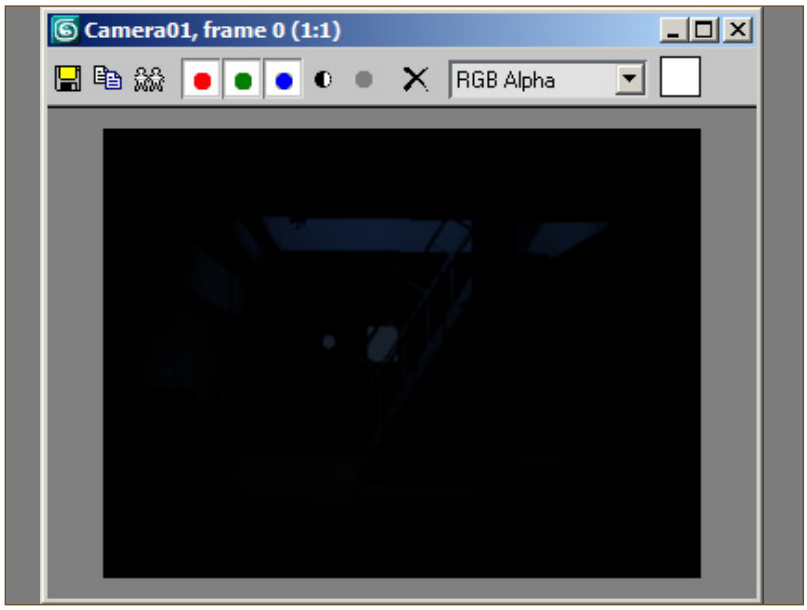


Fig 05

05. Render the scene. Now we have a basic night lighting. (Fig05)

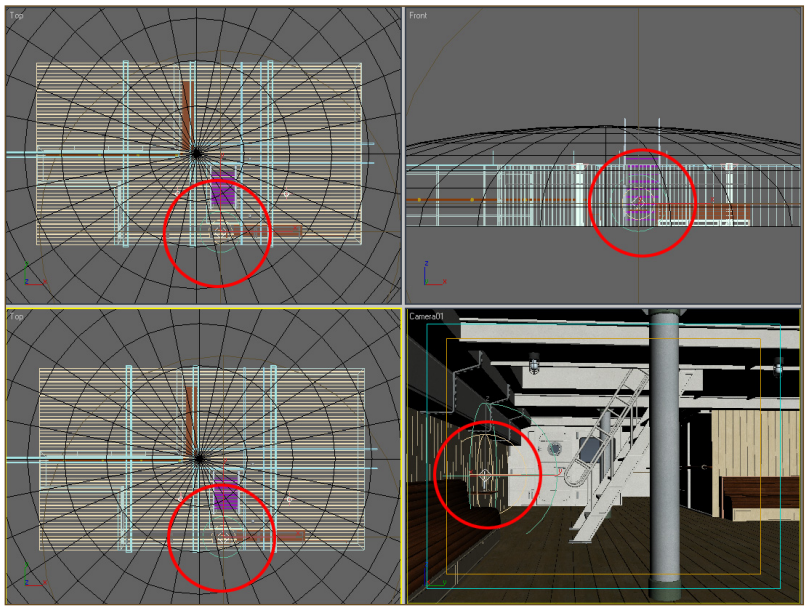
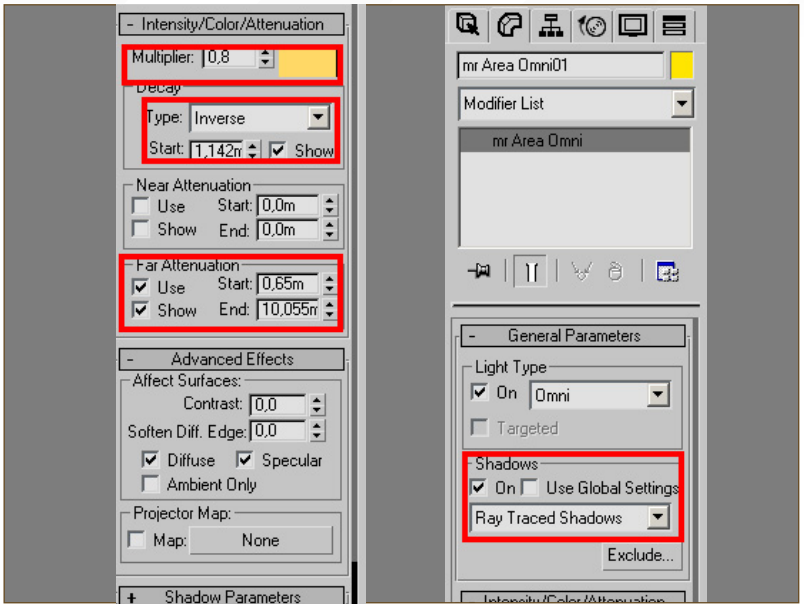


Fig 06

06. Let's create the first candle light. Create a mr Area Omni light and position it just above the candle, on the left of the scene. (Fig06)

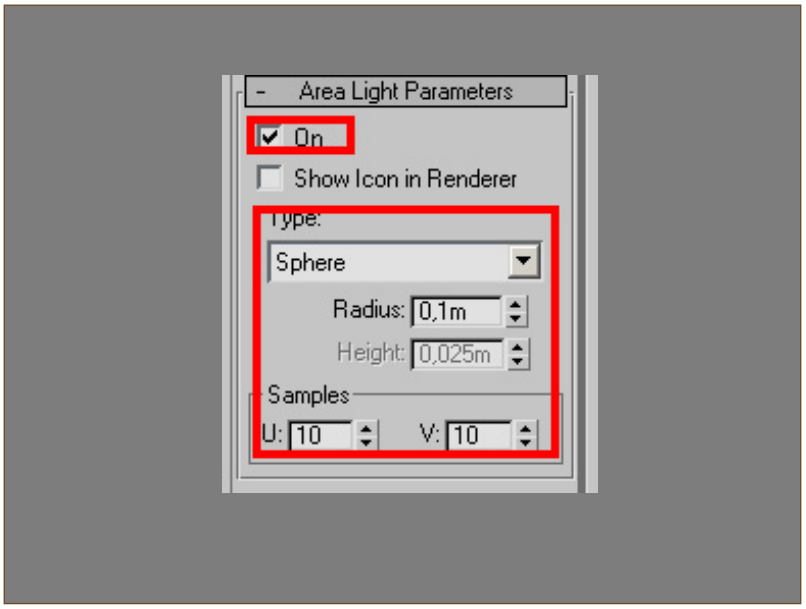
07 .Modify the light's parameters as shown in Fig07. Enable Shadows and make sure that it's set to Ray Traced. Set the Multiplier to 0,8 and the color to a bright yellow/orange. Set the Decay type to Inverse and the Start value to about 1,4. Also, copy the parameters for Attenuation from Fig07.

Fig 07



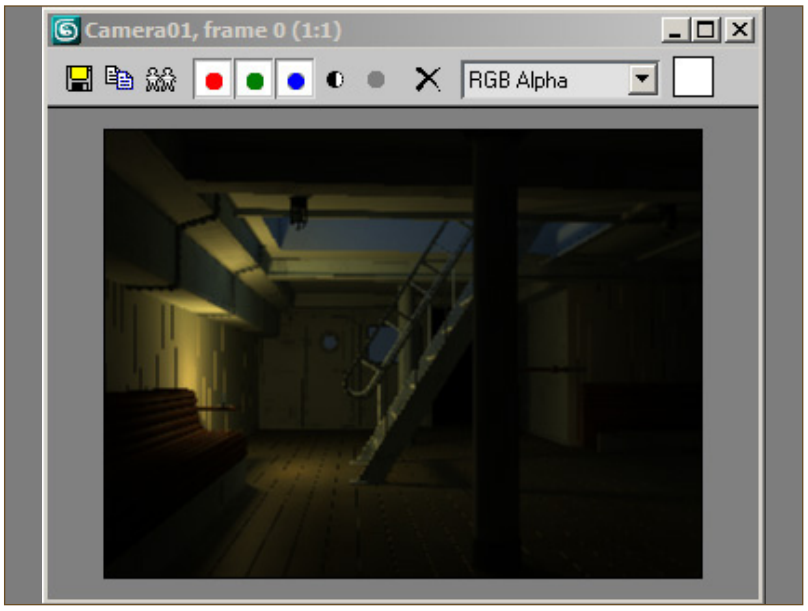
08. In the Area Light Parameters rollout, enable area shadows , set the type to Sphere, the radius to 0,1 and U/V samples to 10/10. (Fig08)

Fig 08



09. Render the scene. The candle lighting now looks pretty good. Now we need to add the other two candle lights. (Fig09)

Fig 09



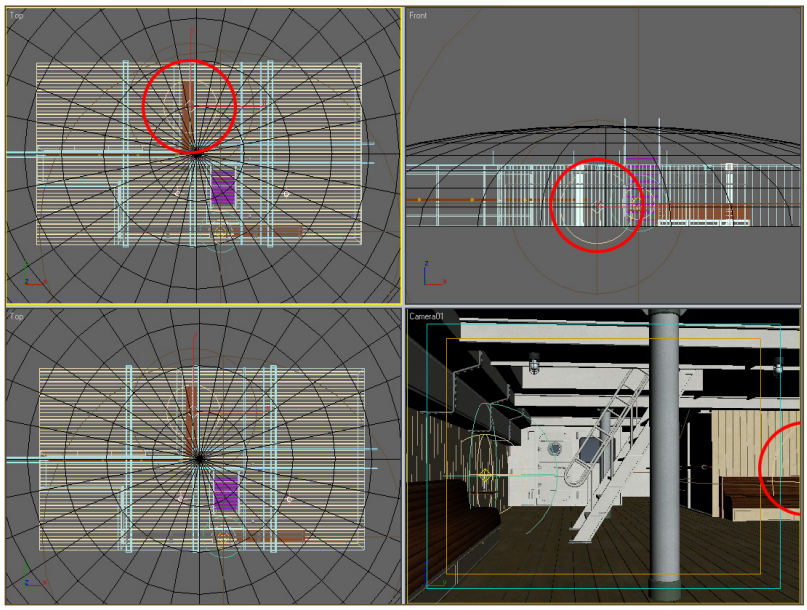


Fig 10

10.Create another mr Area Omni and position it near the seat on the right of the scene. Make sure that it's just out of the view. (Fig10)

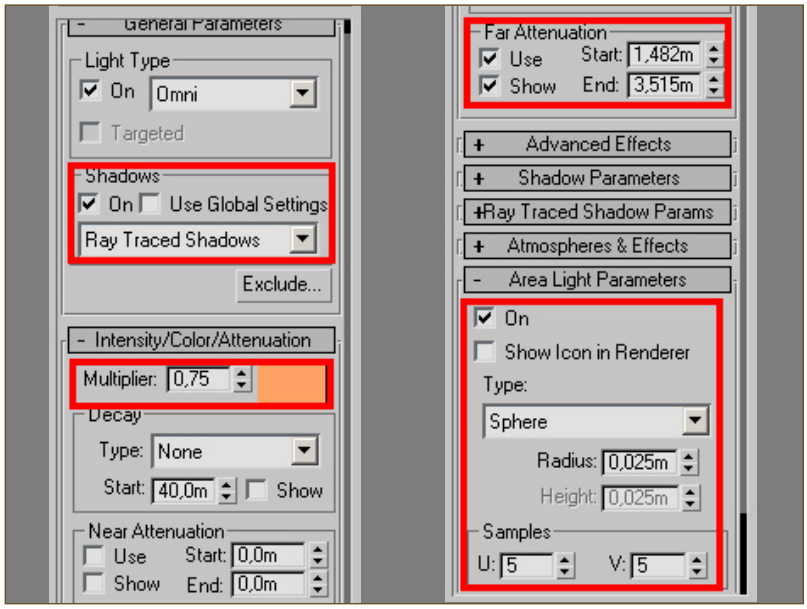


Fig 11

11.Modify its parameters as shown in Fig11. The important thing here is the color (a darker orange) and the Multiplier (0,75). Make it cast shadows (Ray Traced), enable area shadows and copy the parameters for the Attenuation from Fig11.

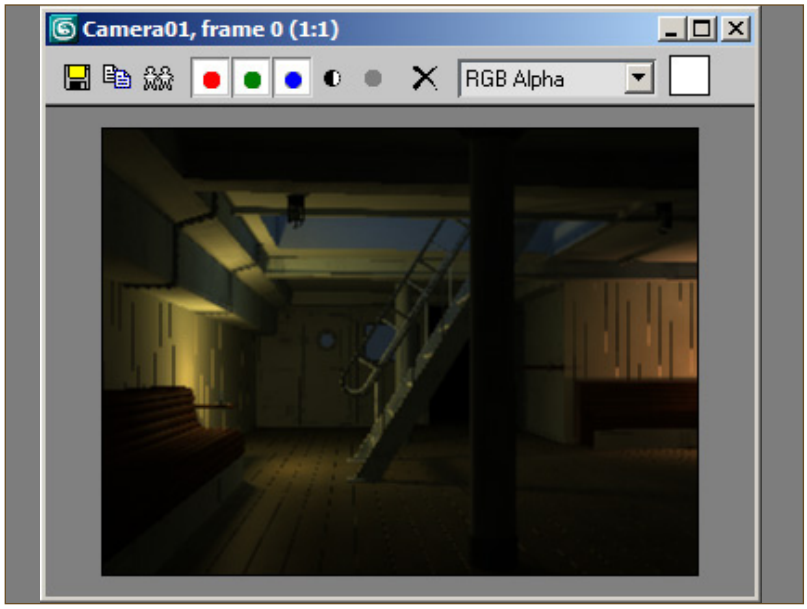
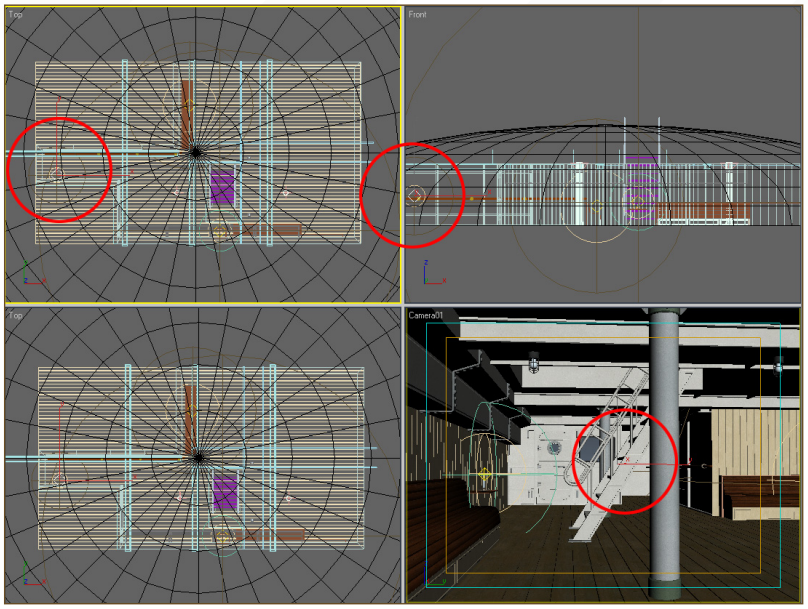


Fig 12

12. Render the scene again to check this new light, too. (Fig12)

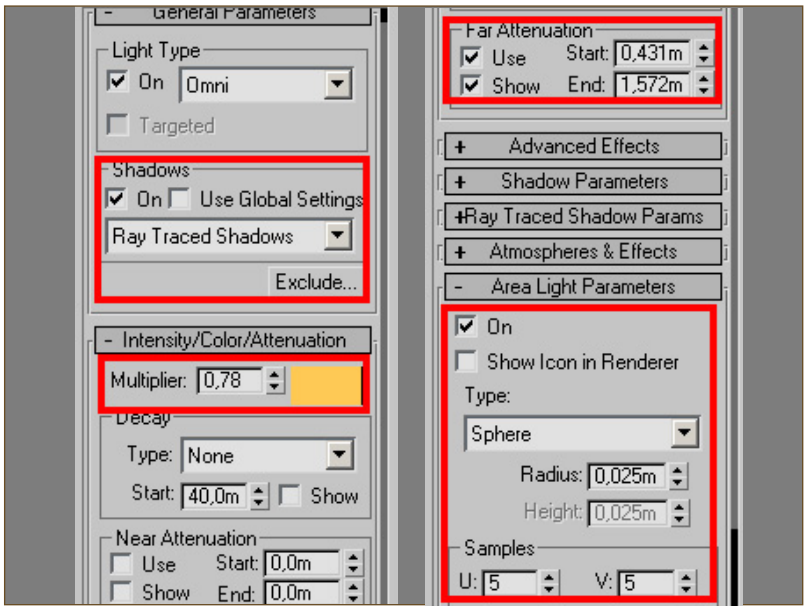
13. Now create a third mr Area Omni and position it in the back of the room, just behind the stairs. (Fig13)

Fig 13



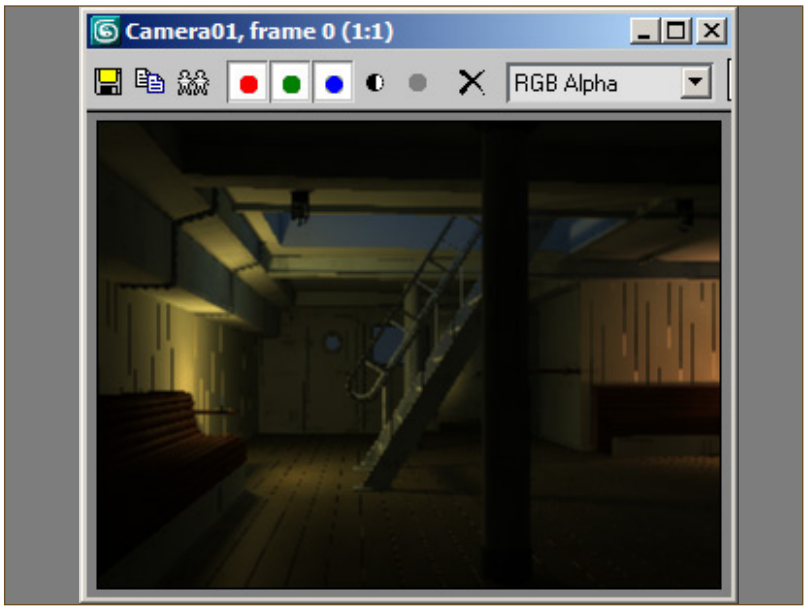
14. Copy the parameters for this light from Fig14.

Fig 14



15. Render the scene again. (Fig15)

Fig 15



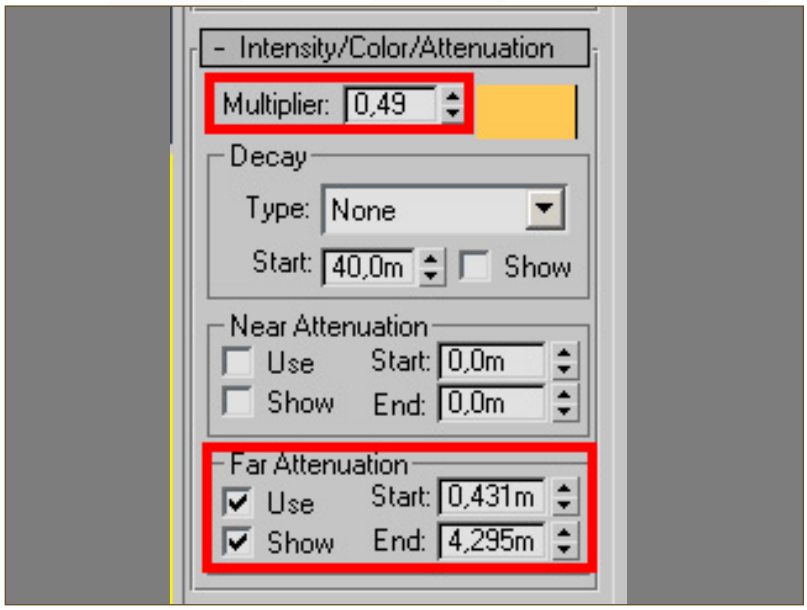


Fig 16

16. The back light is too low, so we need to increase its multiplier and set a brighter color. (Fig16)

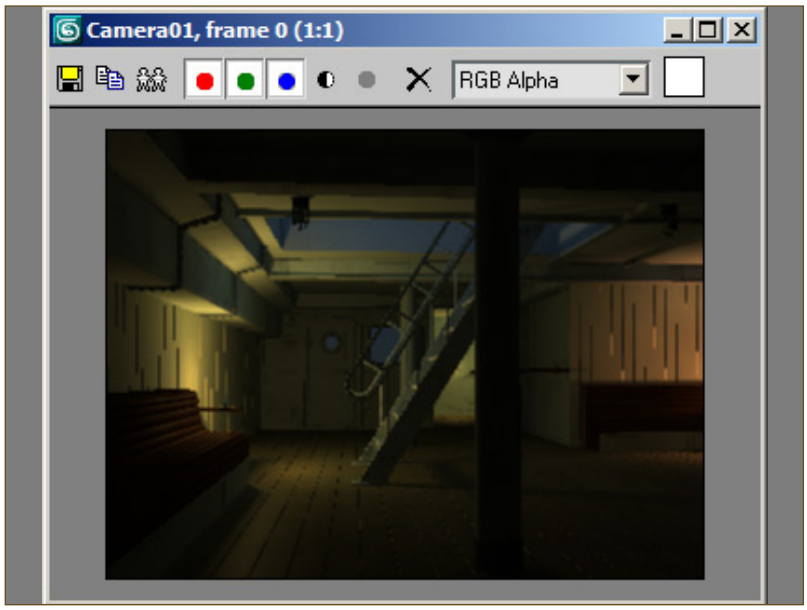


Fig 17

17. Render the scene. Now the back light seems to be ok. (Fig17)

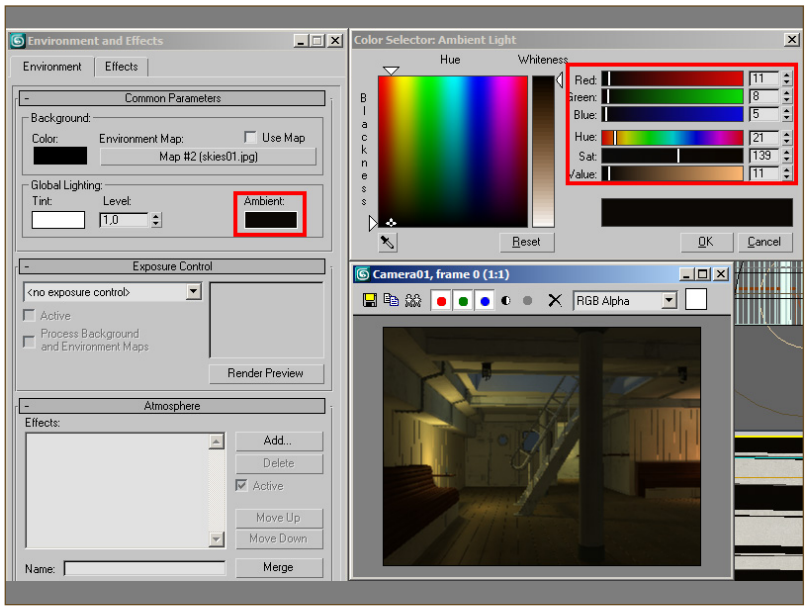
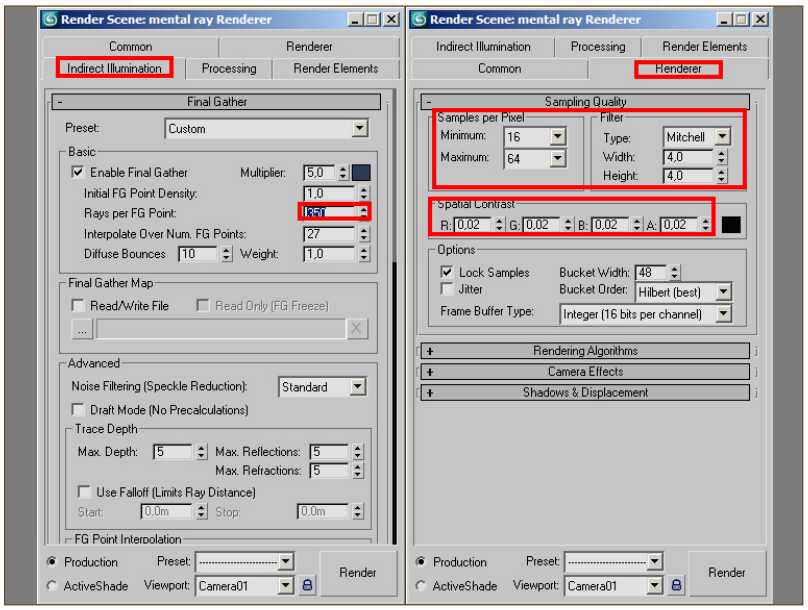


Fig 18

18. The room is still too dark, so we need to increase the general ambient light. Open the Environment panel and set the Env. Color as shown in Fig18. Render the scene again.

19. Now we can set the parameters for the final rendering. Open the Rendering panel and switch to the Indirect Illumination tab. Set the Rays value to 350. Switch to the Renderer tab and copy the parameters for the sampling quality from Fig19.

Fig 19



20. In Fig20 you can see the final rendererd image. Save it as a picture.

Fig 20



21. We also need an Ambient Occlusion pass to composite it over the original rendering. This will help to enhance the details of the rendering. Open the 3DENV_Part5_Candle_AO.max scene file. In Fig21 you can see the parameters of the AO shader that was created and assigned to every object in the scene.

Fig 21

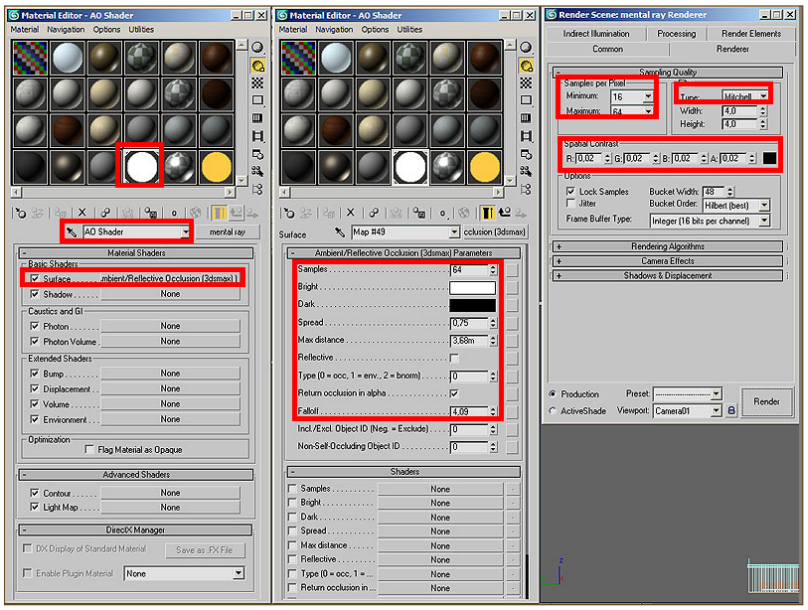




Fig 22

22. Render the AO pass and save it as a picture, too. (Fig22)

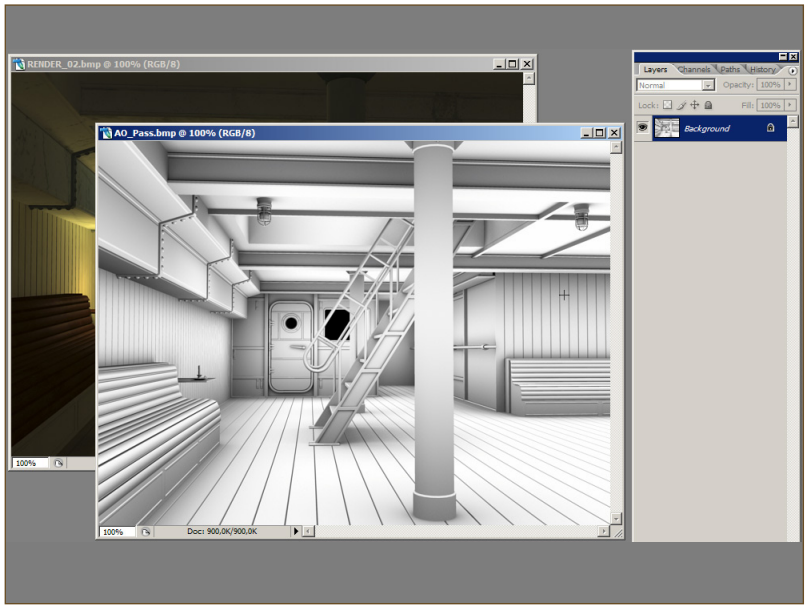


Fig 23

23. Now open both the original rendering and the AO pass with Adobe Photoshop. (Fig23)

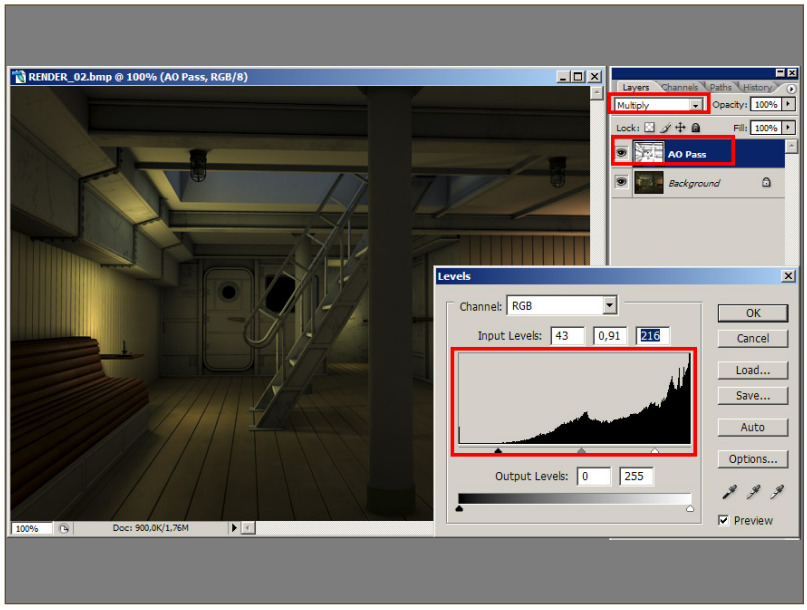
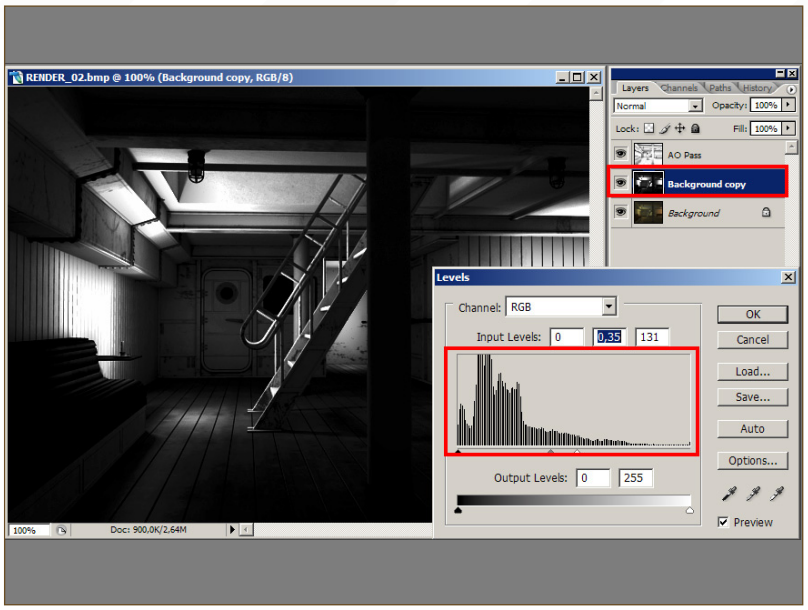


Fig 24

24. Select the AO pass, copy it, and paste it over the original rendering. (Fig24) Change its blending mode to Multiply and use the Levels tool to adjust its contrast.

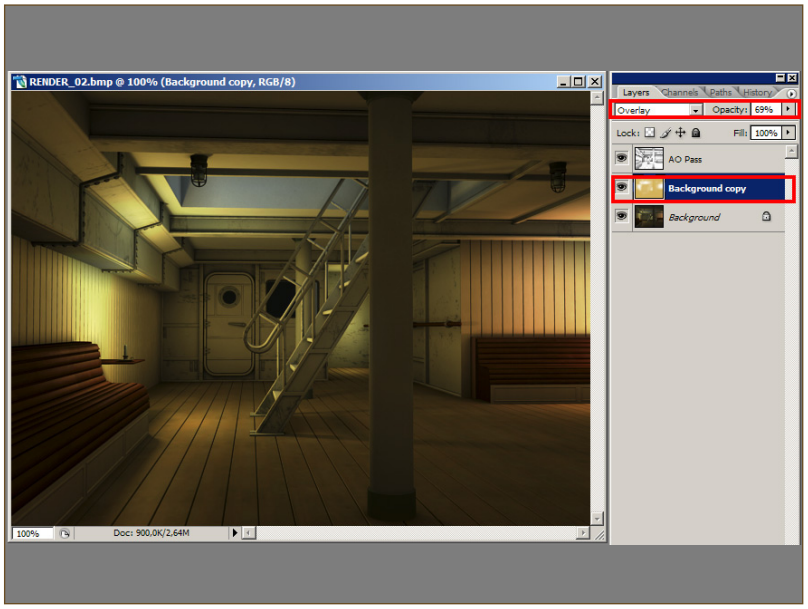
25.Select the Background (original rendering) layer and duplicate it. Desaturate it and adjust its Levels to expose the brightest areas. (Fig25)

Fig 25



26.Apply a fair amount of Gaussian blur to this new layer; use the Hue & Saturation tool to colorize it with a yellow/orange color and change its blending mode to Overlay. Also, decrease its Opacity value to about 69%. (Fig26)

Fig 26



27.Flatten all the layers together. If you wish you can use the Exposure tool to improve the exposure of the final image. (Fig27)

Fig 27





Richard Tilbury

Tutorial by:

Luciano Iurino

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Michel Roger's famous 'Joan of Arc' tutorial re-written for Maya by Taylor Kingston, Cinema 4D by Giuseppe Guglielmucci & Nikki Bartucci, Lightwave by Vojislav Milanovich and Softimage by Luciano Iurino and 3DCreative Magazine.com.

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- Body

Chapter 2: Modeling of the Head
- Head, Ear & Assembly

Chapter 3: Modeling of the Accessories
- The Sword & Armour Legs

Chapter 4: Modeling of the Accessories
- Armour Bust, Hair & Glove

Chapter 5: Modeling of the Accessories
- Accessories & UVW Mapping

Chapter 6: UVW Mapping
- Sword, Clothing, Armour & Body

Chapter 7: Texturing & Hair
- Eyes, Skin & Hair

Chapter 8: Bones & Skinning
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Image by Michel Roger



3D environment lighting

CINEMA 4D

'3D Environment Lighting' is our new 6-month tutorial series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is as follows:

Issue 023 July 2007
Natural Exterior Lighting Sunny Afternoon

Issue 024 August 2007
Natural Exterior Lighting Twilight

Issue 025 September 2007
Natural Exterior Lighting Moonlight

Issue 026 October 2007
Artificial Interior Lighting Electrical

Issue 027 November 2007
Artificial Interior Lighting Candlelight

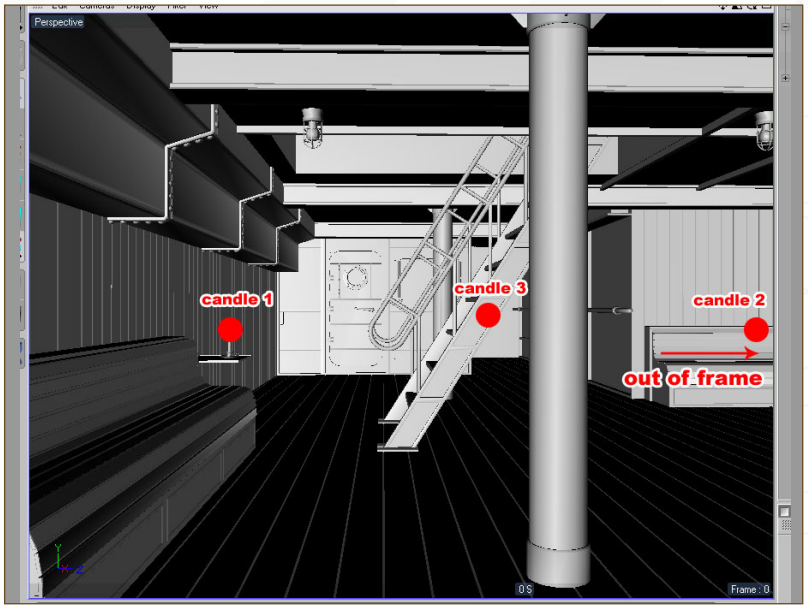
Issue 028 December 2007
Artificial Exterior Lighting Underwater

Enjoy ...

Environmental Lighting Part 5 - Candlelight

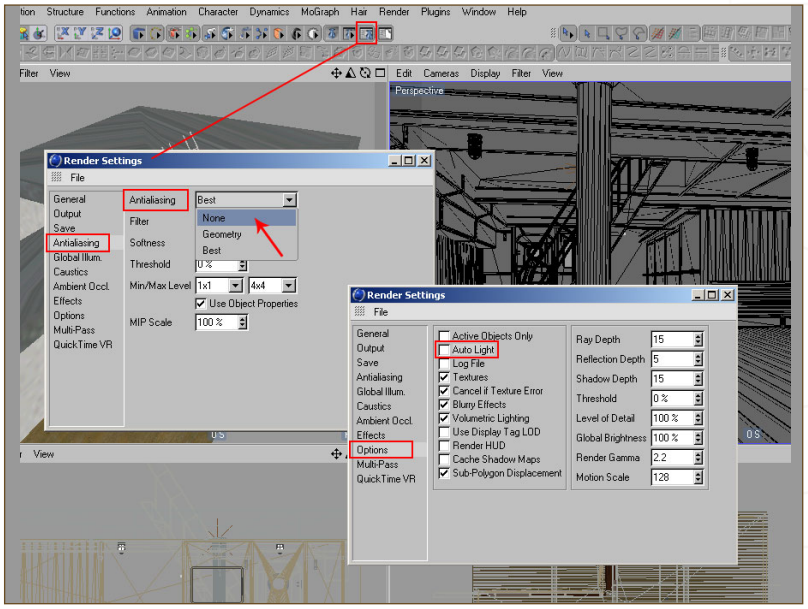
01. Welcome back guys! In this 5th tutorial we will see how to illuminate our ship cabin using candle light. First of all, download the scene which can be found at the end of this tutorial; click on the Free Resources logo. So, open the file and examine it. As you can see from Fig01, the candles are positioned where the red circles appear : one on the table near the left bench; one at the far right of the right sided bench (out of frame) and one at the end of the corridor on the left behind the steps.

Fig 01



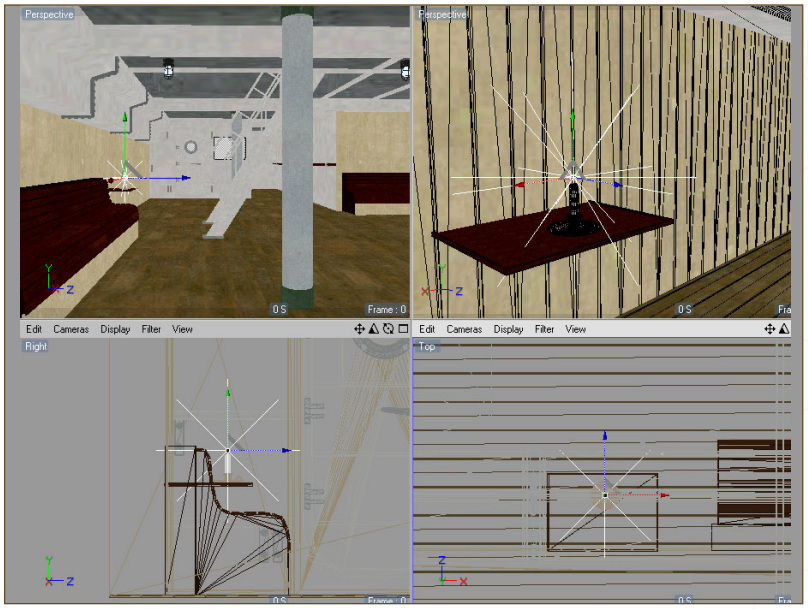
02. As usual, we will use the Global Illumination. I suggest you disable the Antialiasing (AA) parameters and turn the Auto Light off as seen in Fig02.

Fig 02



03. Create a Light and position it over the candle on the table near the bench at the right side of the cabin as shown in Fig03. This Omni will simulate the artificial light generated from the candle.

Fig 03



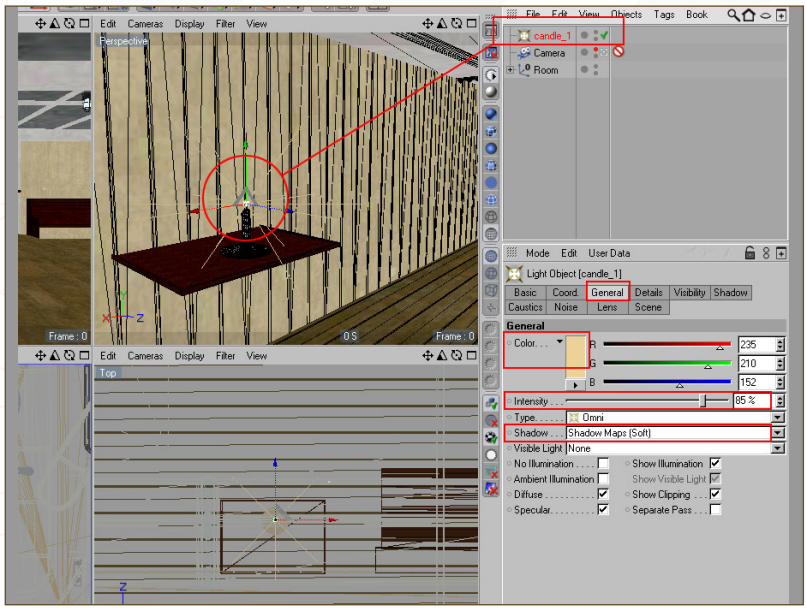


Fig 04

04. Select the Omni that you just created and go in its properties. In the General control panel, change the default white color to yellow as seen in Fig04. Decrease the Intensity of light to 85% and enable the Shadow Maps.

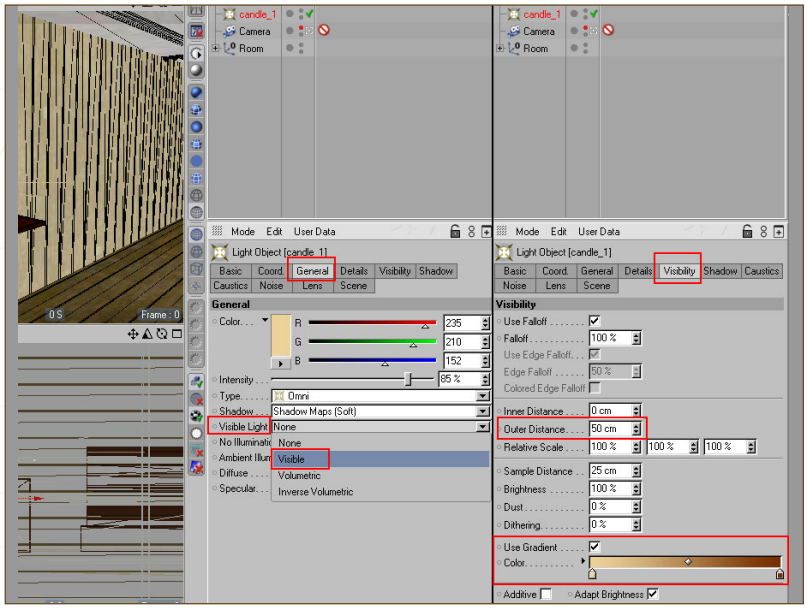


Fig 05

05. Still in the general control panel, enable the Visible Light as shown in Fig05. Now go into the Visibility panel and decrease the Outer Distance parameter to 50cm, then enable the Use Gradient option and modify the colors of the gradient as seen in the bottom right.

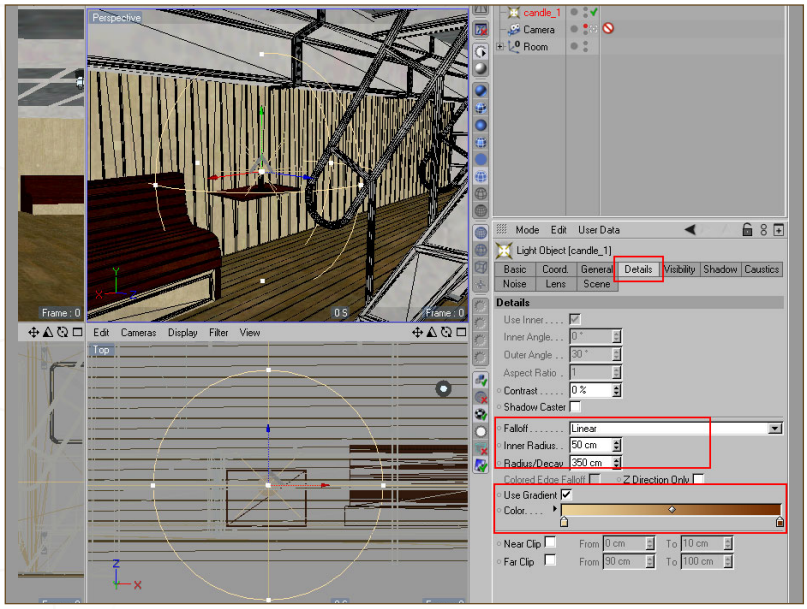
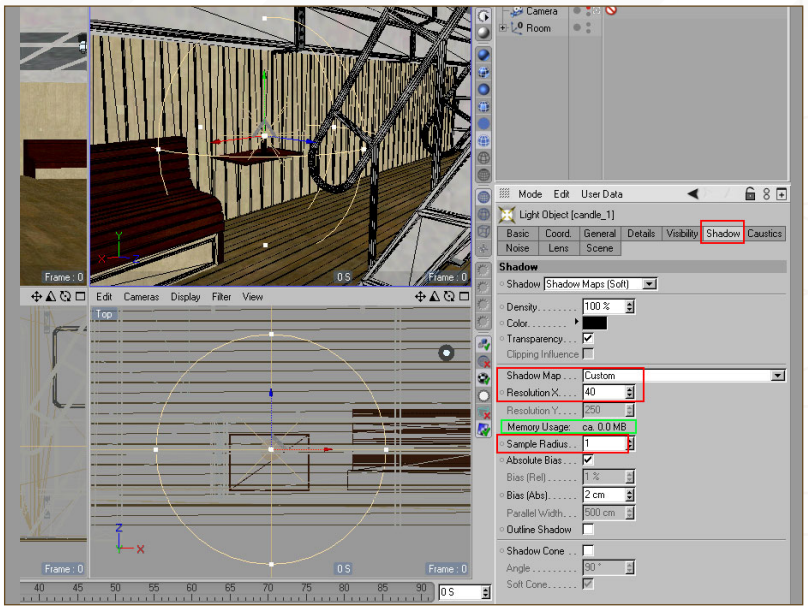


Fig 06

06. In the Details control panel, enable the Falloff and choose the Linear type as seen in Fig06. Change the Inner Radius value to 50cm and the Radius/Decay value to 350cm. Also enable the Use Gradient parameter and use the same colors we used before as seen in Fig06.

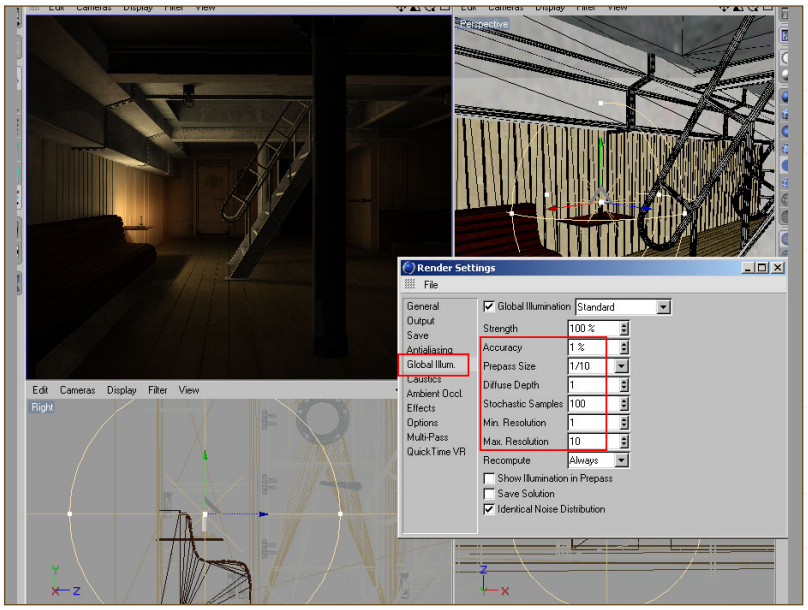
07. In the Shadow control panel, change the default Resolution of the Shadow Map to 40 (type into Resolution X box the number 40) as seen in Fig07. - The Memory Usage (highlighted in green) shows us how much memory will be used to compute this kind of shadow: in our case, you will notice that the memory used is about 0 Mb. If you increase the Resolution of Shadow Map, the Memory Usage will be higher. For example if you choose a Resolution of 2000, the Memory used to compute this kind of shadow will be about 192.0 Mb. – Decrease the Sample Radius value to 1 as shown on the right.

Fig 07



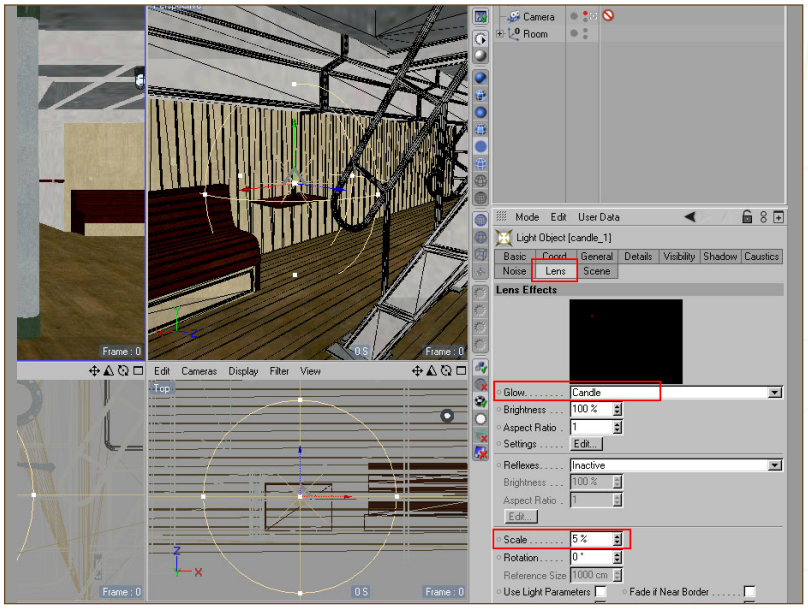
08. Time to render. Open the Render Settings window, go into the Global Illumination control panel and decrease the parameters as seen in Fig08. Then make a render just to check the progress. Not so bad.

Fig 08



09. Now we can add a Glow effect to the candle light. Still in the properties of candle_1 light, go into the Lens control panel. Here choose the Candle as the glow type. Reduce the Scale of the glow to 5% as shown in Fig09.

Fig 09



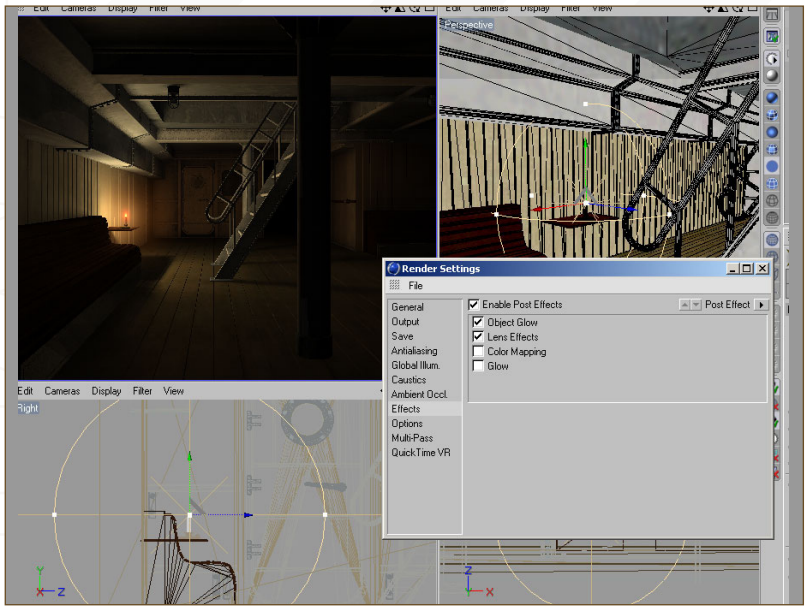


Fig 10

10. Open the Render Settings window and go into the Effect page. Here make sure that the Enable Post Effects parameter is enabled as seen in Fig10. Make a render. Here you can see that the effect has been added and it seems to successfully simulate the candle flame.

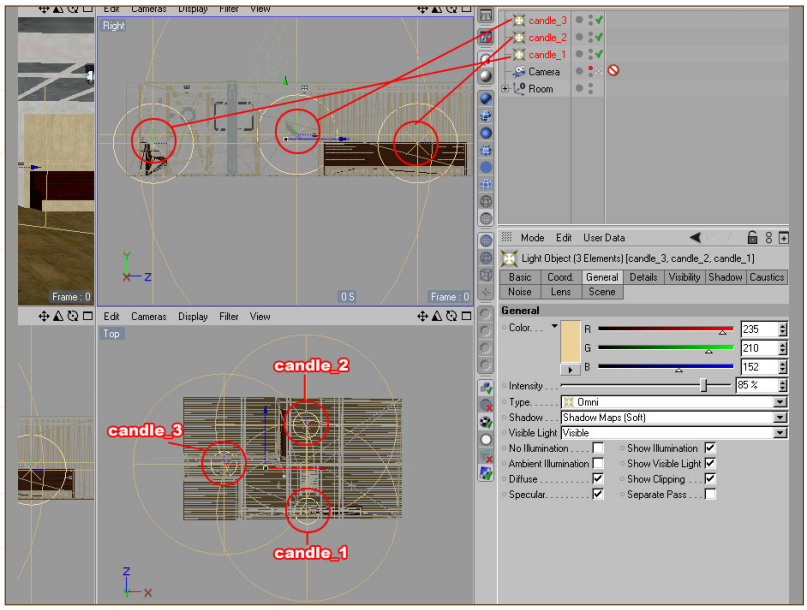


Fig 11

11. Once we have finished setting this light, we can make two copies, then positioning them as shown in Fig11. Since the flame effect will be visible just for candle_1 light, you may disable the glow of the two copies.

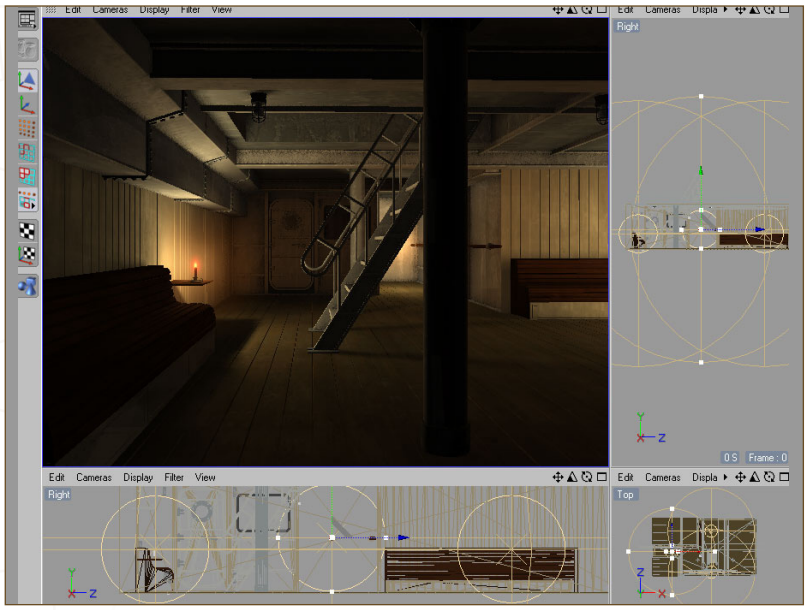
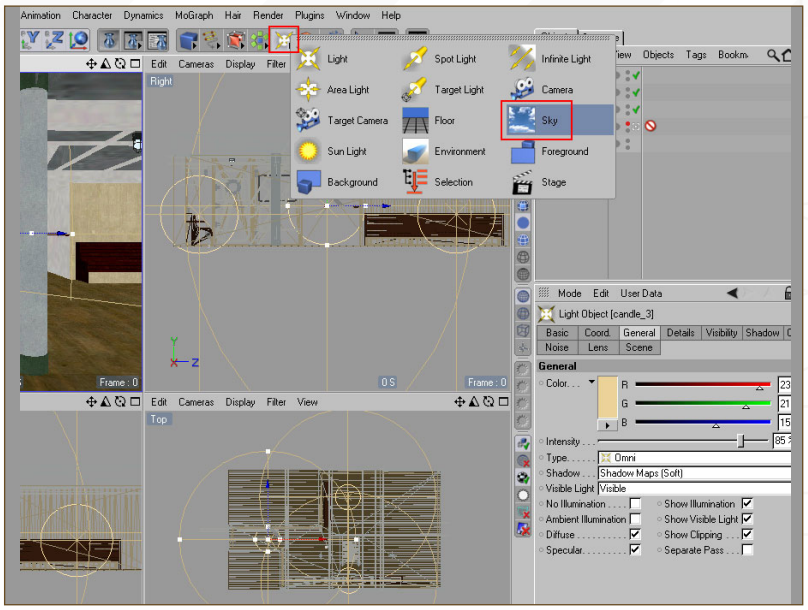


Fig 12

12. Make a render to see how it's going. Fig12.

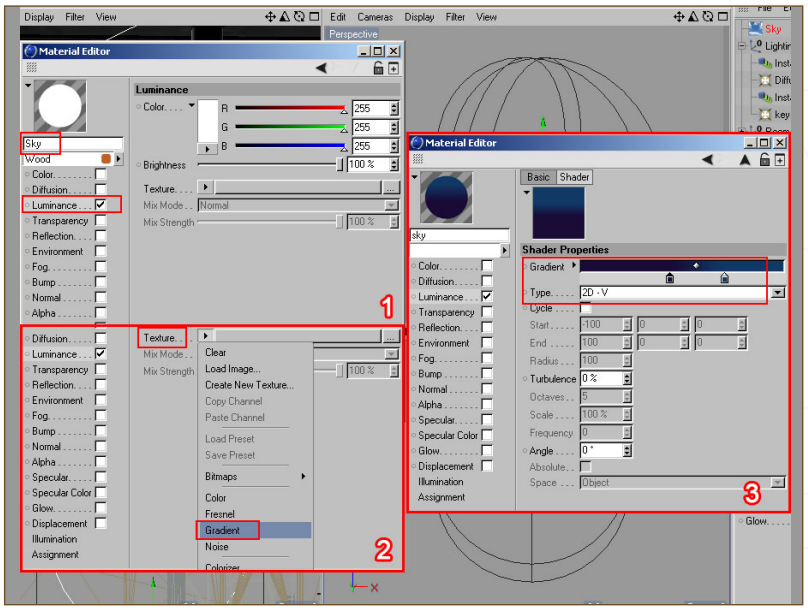
13. Now we'll add a Sky object as in the previous tutorials. Form the main menu go into Objects's menu > Scene > Sky. Fig13. Sky is an infinitely large sphere, whose center is the origin of the world coordinate system. We will apply a simple shader to this object.

Fig 13



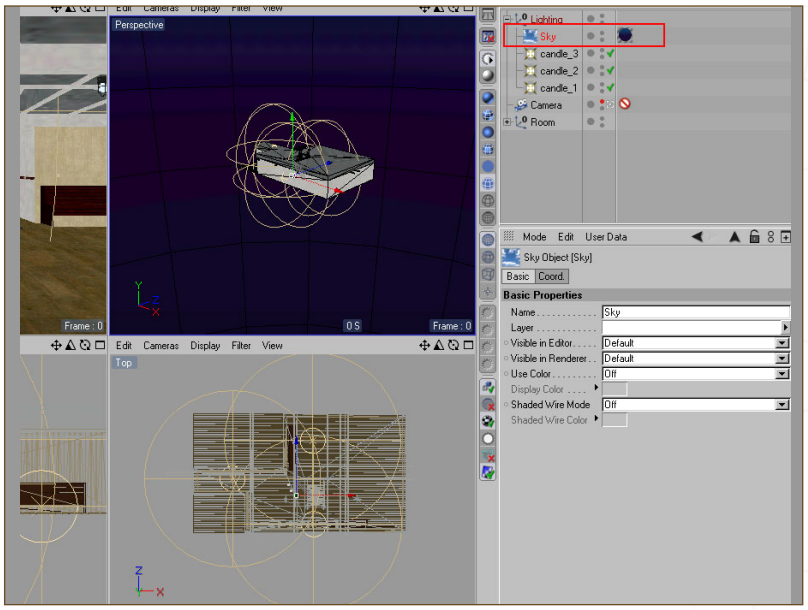
14. Create a new material and name it Sky. Enable only the Luminance Channel as shown in stage1 of Fig14. Into the Luminance channel, load a Gradient into Texture box (stage2). Then change the Colors and the Type of the gradient as seen in stage3.

Fig 14



15. Apply the material to the Sky object. Fig15. This will give to the scene a nocturnal quality.

Fig 15



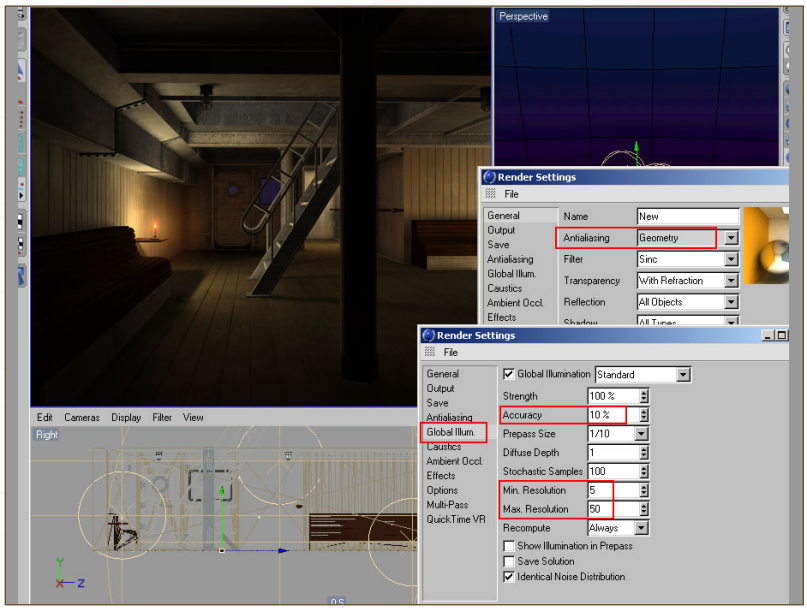


Fig 16

16. At this point we can make a render of an intermediate quality. So enable the Antialiasing and choose the Geometry type. In the Global Illumination page, increase the following parameters: Accuracy to 10%; Min. Resolution to 5; Max. Resolution to 50. Make a render (Fig16). You will now notice the Sky is visible through the windows.

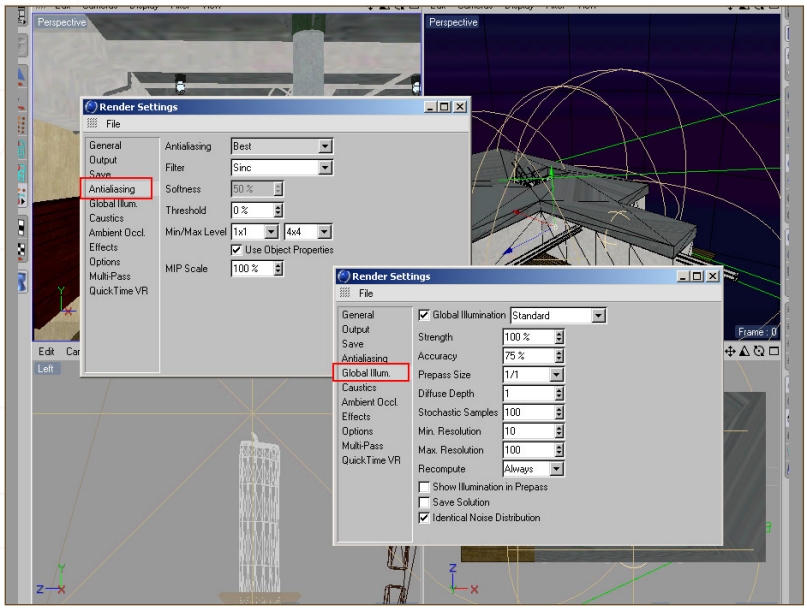


Fig 17

17. Well guys, it sounds like we are done with our lighting, so we are ready for the final render. Fig 17 shows the final Antialiasing settings (left) and the final Global Illumination settings (right).



Fig 18

18. Fig18 shows the final render. That is all for this month. I hope you enjoyed following the tutorial ...



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3D environment lighting

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'3D Environment Lighting' is our new 6-month tutorial series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is as follows:

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Artificial Interior Lighting Candlelight

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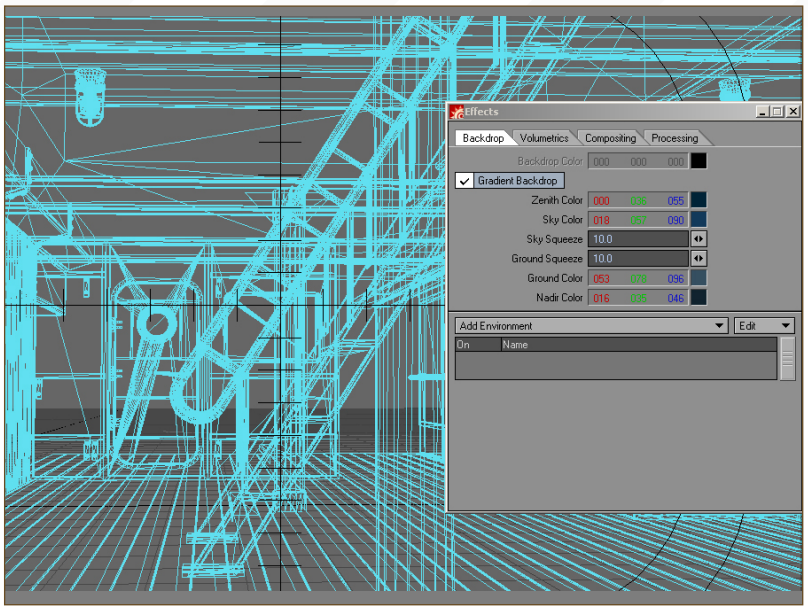
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Environmental Lighting Part 5 - Candlelight

In this part of the tutorial, we want to light our ship interior scene with the help of 3 candles. The scene setup is quite similar to the electric light version which we covered in the last instalment of this tutorial series.

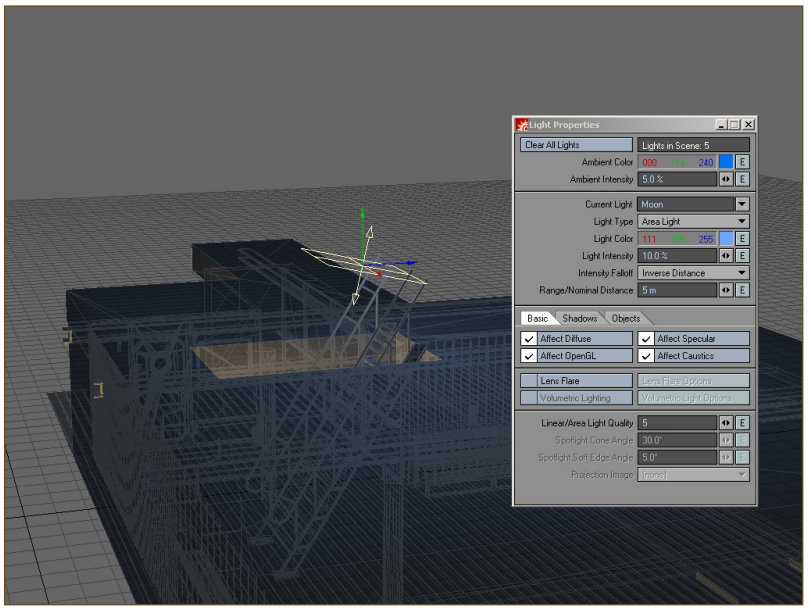
01. To make the scene more believable, we need a background. For this tutorial, a simple Gradient Backdrop will be all it needs. In the Effects window go to the Backdrop tab, and use a dark blue for Sky Color and a brighter blue for the Ground Color. The other gradient colors can be black. Sky- and Ground Squeeze should have a value of 10.0 to fit nicely with the scene scale. (Fig 01)

Fig 01



02. In Light Properties change the Ambient Light to a blue color and an intensity of 5%. Now move the default light – renamed “Moon” – just above the big roof entrance of our scene, so it shines down the stairs. Change the light type to Area Light, color it blue and use an intensity of 10%. Intensity Falloff should be set to Inverse Distance with a Nominal Range of 5 m. This is a very weak light, so we would not see much with this scene setup until we start to render with radiosity, which we will do later on.
(Fig 02)

Fig 02



03. Add a new Point Light. This will be our first candle light, so place it directly above the candle where the middle of the flame would be. We use a warm orange color for this light and a Light Intensity of 100%. As candlelight is usually very gentle and not that strong, we use a Linear Falloff with a Range of 3 m. (Fig 03)

Fig 03

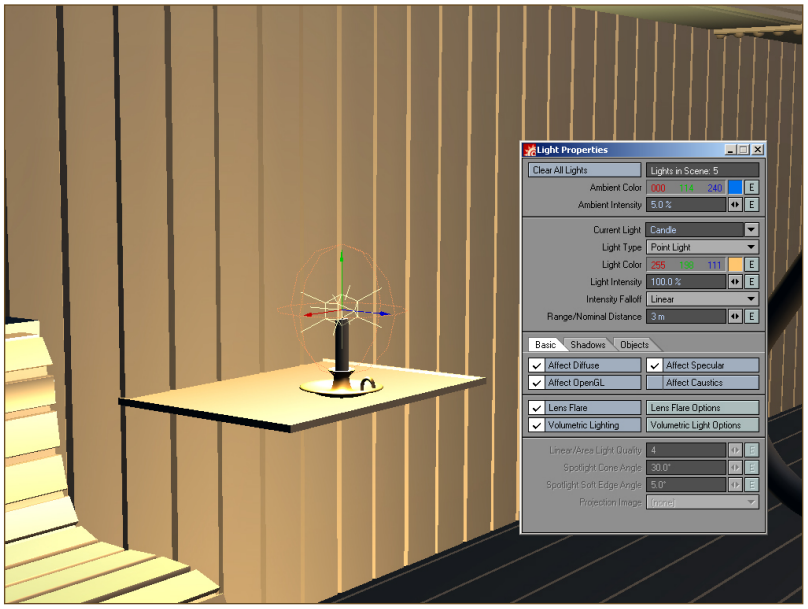




Fig 04

04. Make a test render. The lighting looks very good but we need to make it look like a candle, so we need to simulate the flame. (Fig 04)

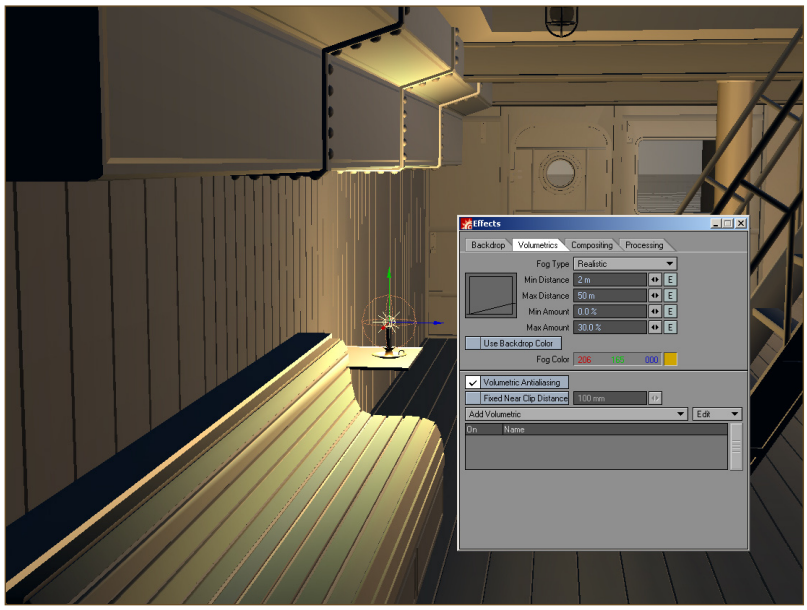


Fig 05

05. Go to Effects -> Volumetrics and add a Realistic Fog. Minimum Distance is 2m and Maximum Distance is 50 m. Min Amount is 0 and Max Amount is 30%. With this setting we create a little haze in our room, as if the candles illuminate the dust floating in the room. Use an orange color for this fog. (Fig 05)

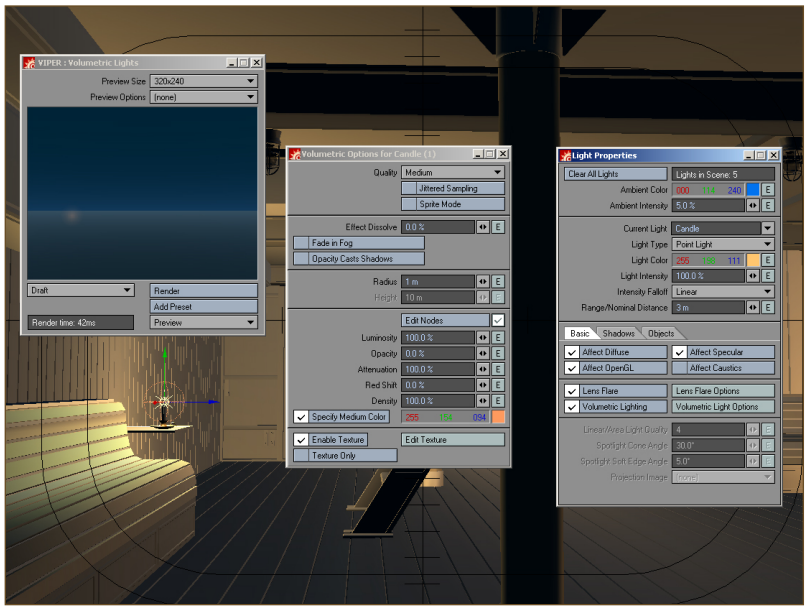


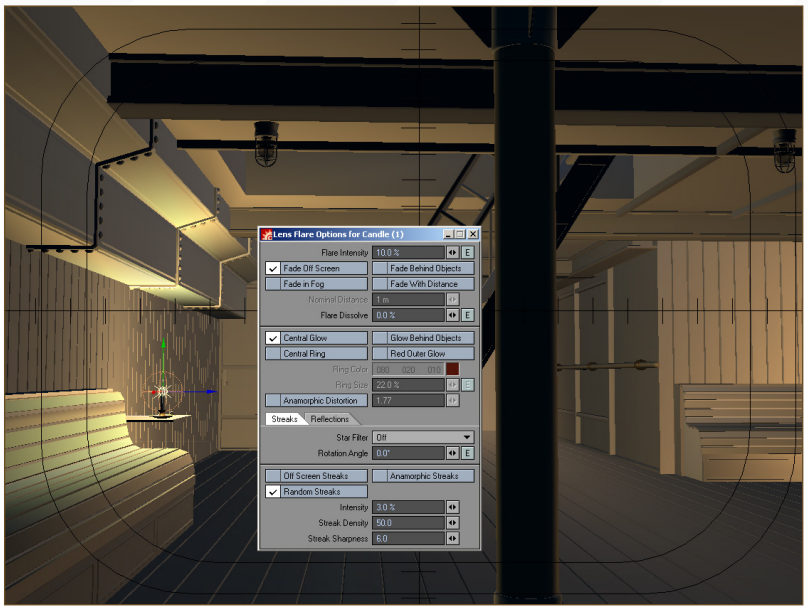
Fig 06

06. Back in the Light Properties, check Volumetric Lighting for the candle light. Then go into the Volumetric Light Options panel. Also open up a VIPER window – this preview window will give you direct feedback to your volumetric light settings. If you hit the render button, you already have this as a background in the VIPER preview; otherwise it only shows the backdrop gradient. Volumetric settings: Quality should be set to Medium; Radius = 1 m; Luminosity = 100%, Attenuation = 100%; Density = 100%; all the other settings should be 0%. Check Specify Medium Color and also use an orange color. With these settings, we simulate the shine around the candle fire. (Fig 06)

07. Now for the actual flame, we use a lens

flare. Back in Light Properties, check Lens Flare. In the Lens Flare Options, check Fade Off Screen, Central Glow and Random Streaks. Flare Intensity is only 10%, as the lens flare for the candle fire should be very small. Streak Intensity = 3%; Streak Density = 50.0 and Streak Sharpness = 6.0. (Fig 07)

Fig 07



08. Now make another test render. Looks like a candle light to me! (Fig 08)

Fig 08



09. Now all you have to do is copy the candle light into two more positions. These should be out of view so place one in the niche of the back and the other one on the right outside of the camera view.
(Fig 09)

Fig 09

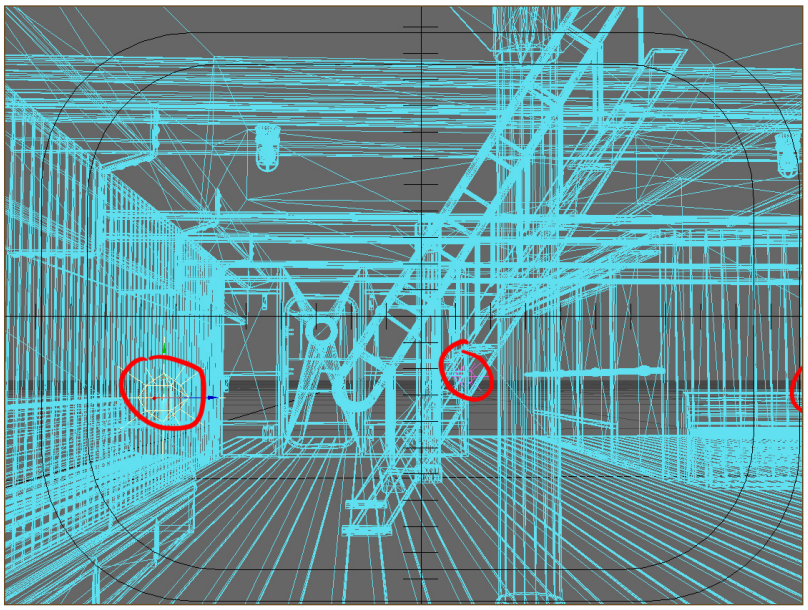




Fig 10

10. The render now starts to look like the real thing apart from the area around the back wall which is a bit too dark. (Fig 10)

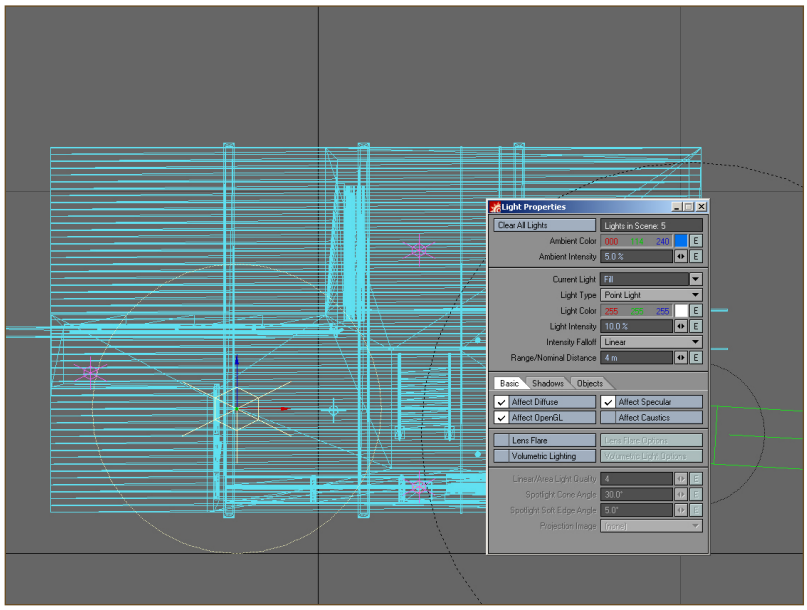


Fig 11

11. We need to add another Point light. Place this fill light directly in front of the back window. Color it white, Light Intensity = 10%. Intensity Falloff should be set to Linear, and the Range is 4 m.
(Fig 11)

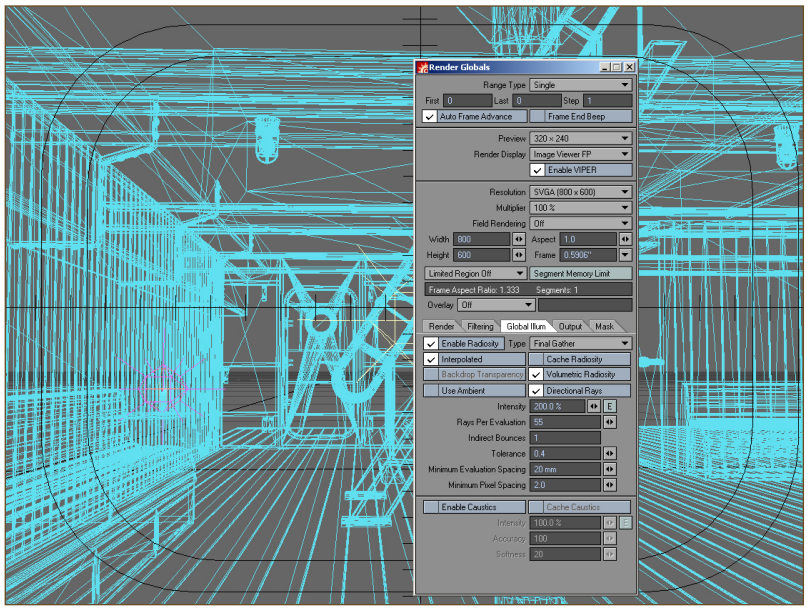
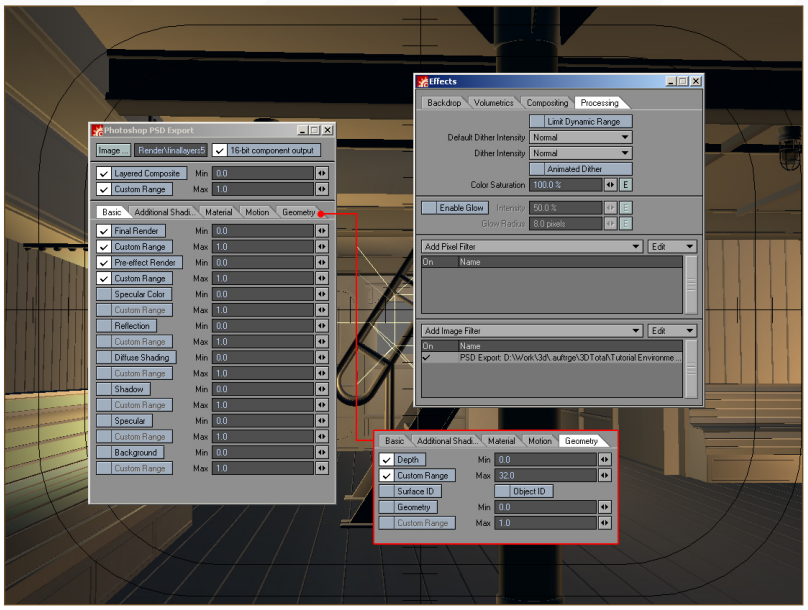


Fig 12

12. Now it is time to prepare for the final render. In Render Globals -> Global Illumination Tab, check Enable Radiosity. Type = Final Gather; check Interpolated, Volumetric Radiosity, Directional Rays. Intensity = 200%; Rays Per Evaluation = 55; Indirect Bounces = 1; Tolerance 0.4; Minimum Evaluation Spacing = 20 mm; Minimum Pixel Spacing = 2.0. We are using these Radiosity settings throughout the whole series of these lighting tutorials, as they have proven to be a good compromise between quality vs. render time. If you need better quality, use higher Rays Per Evaluation settings and lower Tolerance or Minimum Evaluation Spacing values. (Fig 12)

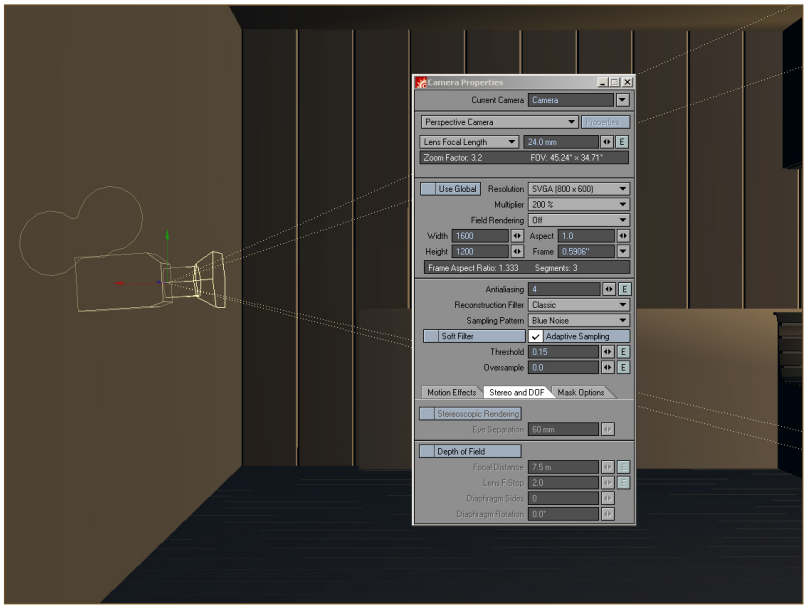
13. For saving our image, we are as always using our layered PSD file, as it gives us full control over all aspects of our image. It also enables us to add Depth Field in post production, which saves render time compared with the DOF of Lightwave. In Effects -> Processing tab, add the Image Filter “PSD Export”. In the filter properties, choose a file path where the image should be saved and check Layered Composite. In the Geometry tab also check “Depth”. All the other settings don’t need to be touched. (Fig 13)

Fig 13



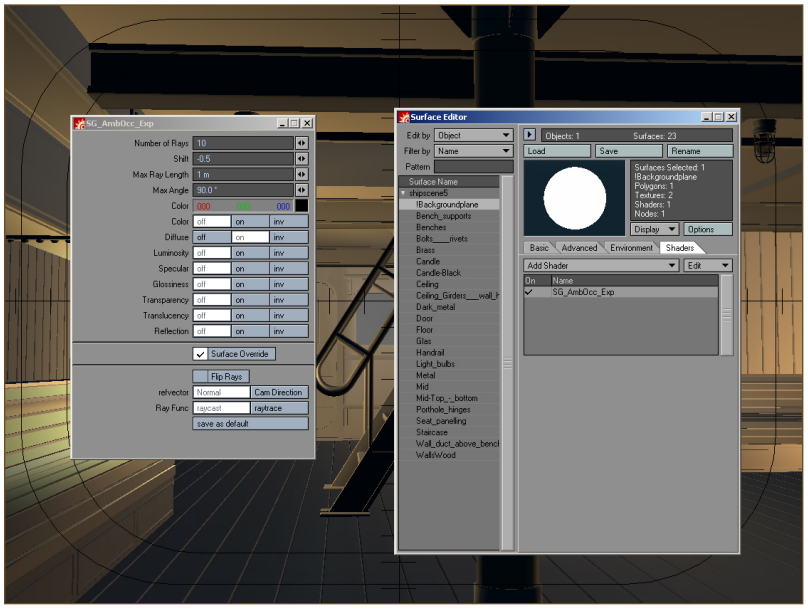
14. Now render out the image via the “Render Scene” option making sure you set the image sequence to render all frames from 0 – 0 (so you render only that one frame). Also make sure that your camera settings are at the resolution and Antialiasing setting you need. I used a perspective camera with 4 levels of Antialiasing, rendered with Adaptive Sampling and a Threshold of 0.15. (Fig 14)

Fig 14



15. As usual, you can render out an additional pass of Ambient Occlusion. If you followed this series of tutorials, you can also just take the AO render of the previous tutorials, as we did not change the camera. If this is new for you, then go to Material Editor and add the shader “SG_AmbOcc_Exp” to all your surfaces. You can leave all settings at the default value. It is important that Surface Override is checked, so it appears completely white. Make sure to disable Radiosity for rendering and use the same resolution for rendering as for your final render. Save the rendered image as ao.psd (Fig 15) Note: SG_AmbOcc_Exp is a free Ambient Occlusion Plugin that you can find and download via the great www.flay.com database.

Fig 15



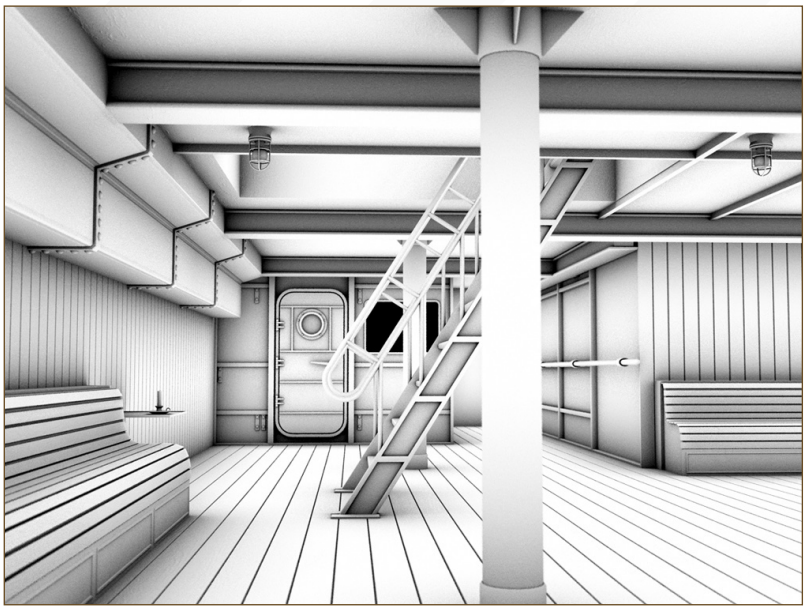


Fig 16

16. When you look at the render, you see that it is completely white. Only areas appear black, where the light finds it hard to reach. (Fig 16)

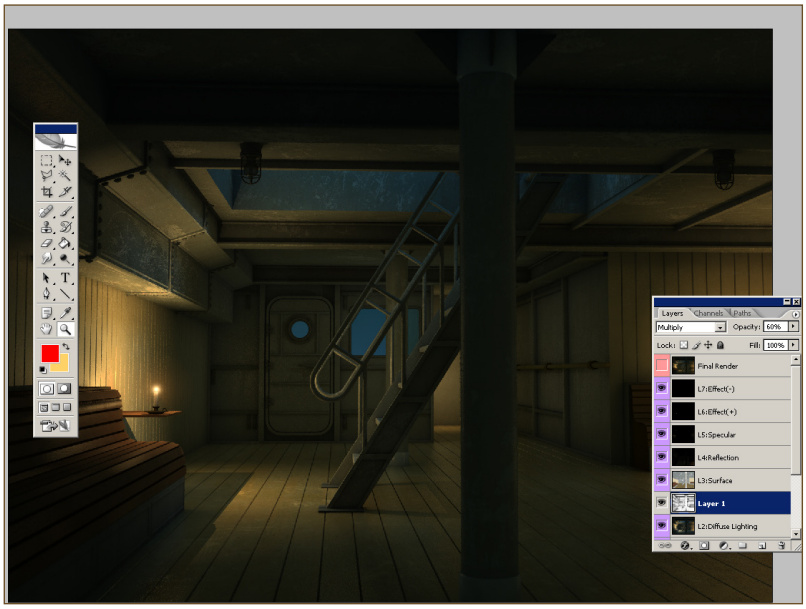


Fig 17

17. In Photoshop, open your layered PSD render. Now also open the Ambient Occlusion pass you just rendered (ao.psd), click on Select -> All and then on Edit -> Copy. Paste it into the layered PSD between layer “L3:Surface” and “L2:Diffuse Lighting”. Change Blending Mode to Multiply and Opacity to 60%. This way all reflections, light reflexes and lens flares keep their intensity. (Fig 17)

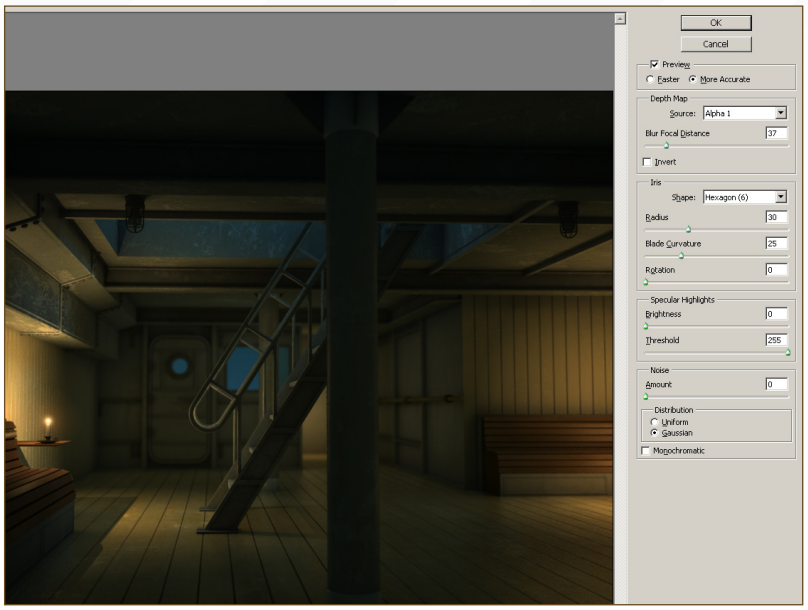


Fig 18

18. Now select and copy the layer “Depth” which can be found at the bottom of all the layers in your file. Go to Channels and create a new layer (called “Alpha 1”). Now paste the Depth pass there. (Fig 18)

19. Finish all your image manipulation then merge all layers. Choose Filter -> Blur -> Lens Blur. As Depth Map Source you select the alpha you just created (Alpha 1). To have the ladder sharp, simply click into your image. This defines the Blur Focal Distance according to your Depth map. Now your background is a bit blurry, and the foreground is sharp. (Fig 19)

Fig 19

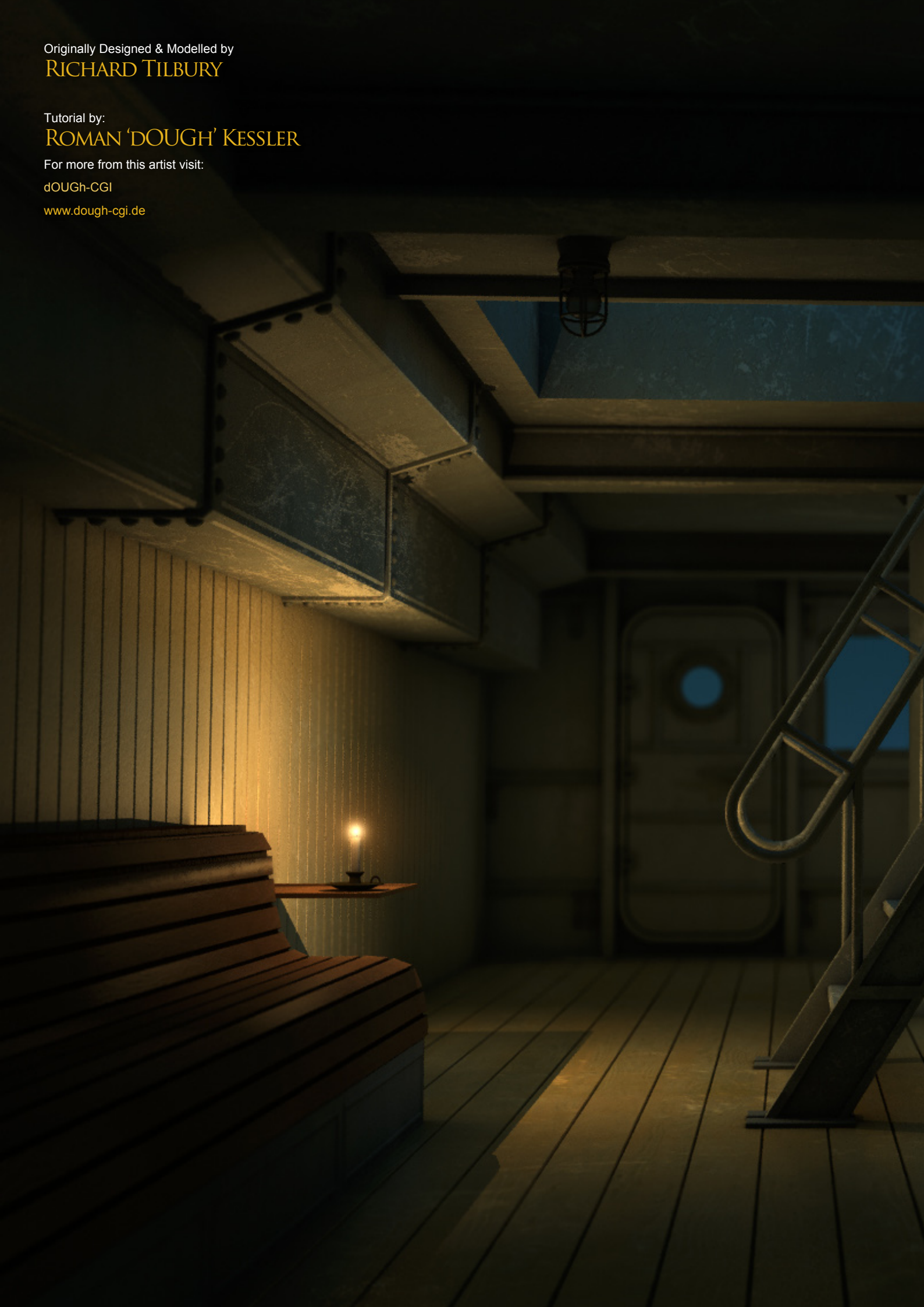


Now have a look at your final image. I think it resembles a very nice and soft lighting condition with candlelight very well. Hope you enjoyed this part of the tutorial and feel free to contact me via my website if you have any questions or suggestions.



Originally Designed & Modelled by
RICHARD TILBURY

Tutorial by:
ROMAN 'DOUGH' KESSLER
For more from this artist visit:
dOUGh-CGI
www.dough-cgi.de

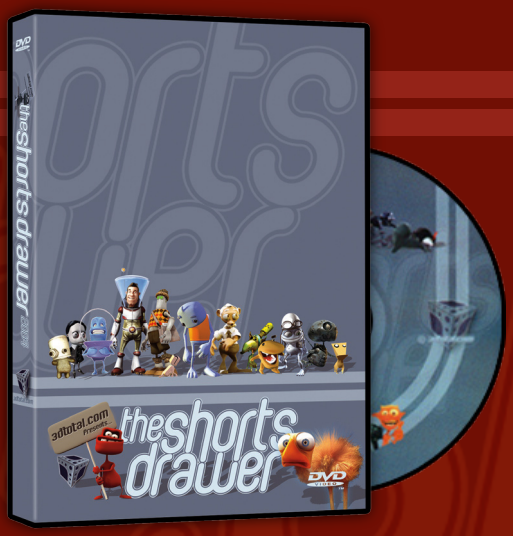



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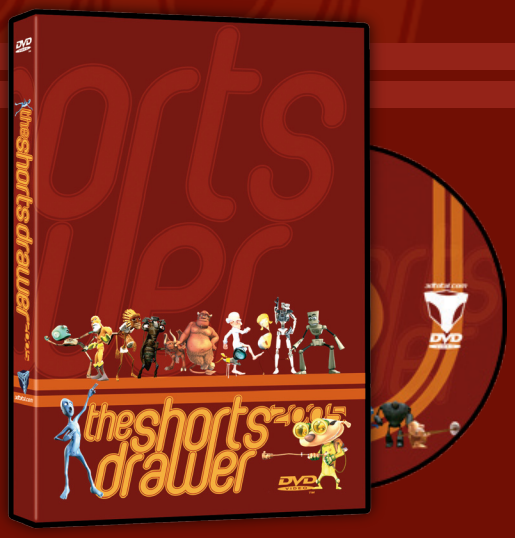
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Environmental Lighting Part 5 - Candlelight

Ahoy, and welcome back to the fifth part of our lighting tutorial series! Interestingly the general matter on this one will technically be the same as the last time, where we discussed the behavior of electric light bulbs, however the result will be considerably different. So lets turn off the lamps and fetch the matches, to get our candle light tutorial started.

In the last tutorial we already learnt the technical aspects of heated bodies, like tungsten filament, or wick. It became clear that in a simplified yet meaningful way the emitted color always has a very determined type, only depending on the temperature of the heated body. And curiously this special rule does not depend at all on the material of the heated body. So we can pick up where we left, and simply translate these rules to our new topic.

Lets recall the behaviour of a heated 'black body'. Whenever matter is heated, it emits photons with certain intensities at distinct frequencies. This 'fingerprint' of the radiation is then called a spectrum. Now a black body is an 'ideal physical model' which absorbs all radiation and which does not reflect any at all. The interesting thing about this is that the spectrum ('color') of such a body is strictly defined by physical law, and is solely dependant on the actual temperature of the body. Of course this is somewhat simplified, as the actual emission spectrum of our heated material (i.e. carbon and hydrogen, bound in the, say, paraffin of our candle) is neglected this way. Still this 'ideal model' does a good job at simluating our situation.

01. Now that we have an idea of how to model the color of our candle-light we can start to give it shape. According to gravity and buoyancy laws (hot things move upwards due to their lower density), the candle flame has this well

Fig 01

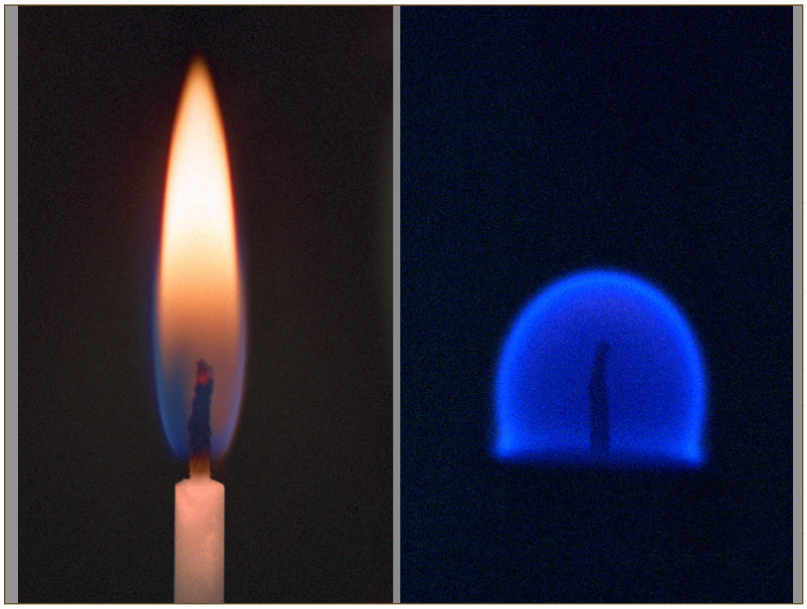
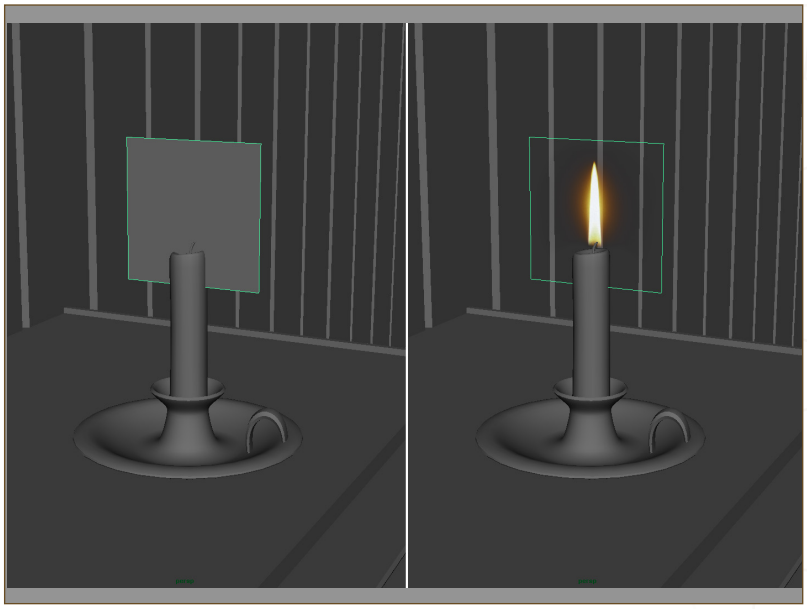


Fig 02



Fig 03



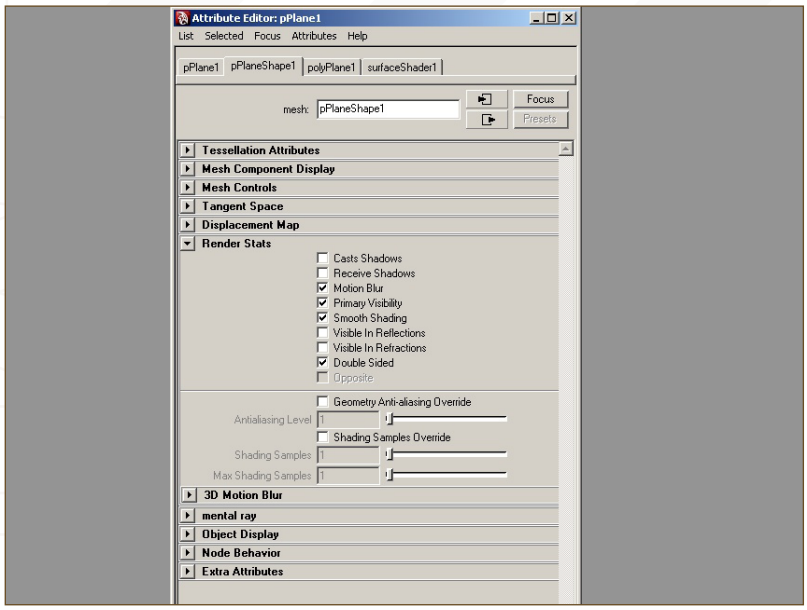


Fig 04

known 'drop shape'. If you ever wondered how a candle burns at zero gravity, see the right side of Fig01 - the hot and 'lighter' gas does not circulate ('convect') as well as down here on earth, instead it spreads uniformly and no oxygen (although available!) raises it, so it is likely forced to become extinguished.

02. For the sake of simplicity I decided to use a simple photograph of a candle flame as a so called sprite, or billboard object (Fig02). I already adapted the image's hue to the temperature we will be using later on, which you might want to consider too, but more on this shortly.

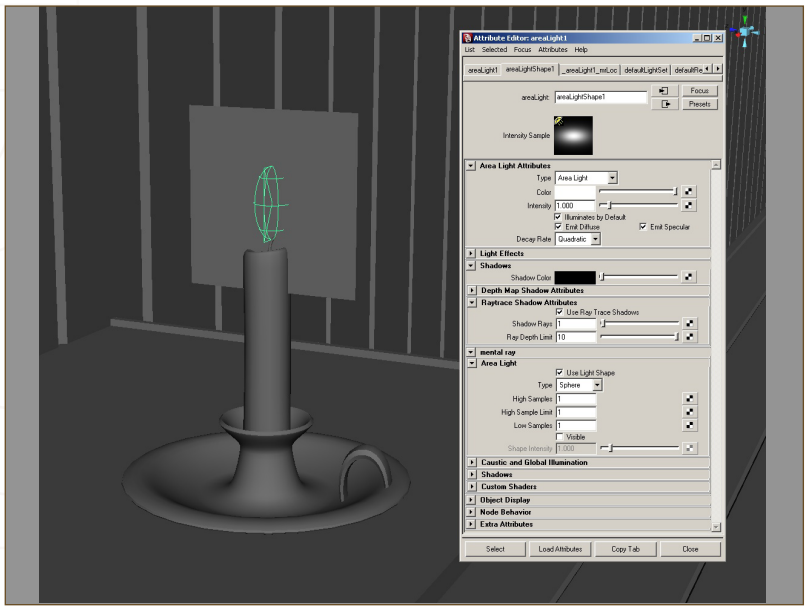


Fig 05

03. The billboard is then placed closely to the wick (Fig03), to model the flame. This is a simple and popular method of representing a rather complex shape, be it flames, snow, leaves, grass, pylons, and probably an arbitrarily huge bunch of other things one could think of.

04. It obviously makes sense to take care of certain factors when dealing with such 'tricks', so I adjusted all necessary render flags of this sprite, to avoid render artifacts (Fig04). For example, it does not make sense to let this helper object cast shadows (after all it is replacing a light emitting entity), or to leave it visible to reflections or refractions (the actual light will handle this later on with the 'highlights').



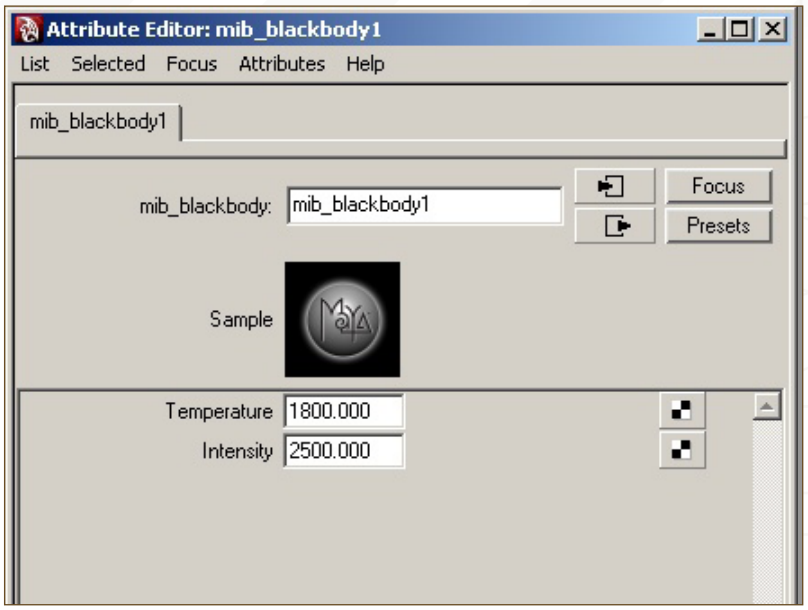
Fig 06

05. The next rational step in our abstraction of the candle light is to build the actual light emitting 3d representative. I chose a spherical area light for this job, with a little scale in the 'up' direction' (Fig05). I placed it closely to where our 'fake' flame is, right above the wick. Since we took care of the sprite's render flags it does not interfere with the light at all.

Now that we have our light source constructed, we shall give it life with an appropriate color. As described earlier, we have robust guidelines on how to deal with this, in order to create naturally looking candle light. We simply need to know the approximate temperature at which a candle

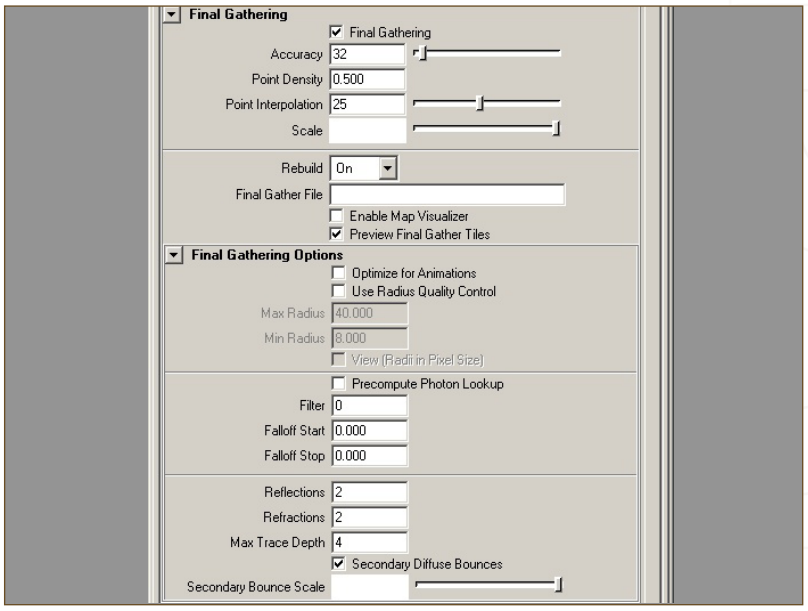
flame burns on average. The sources on this however seem to diverge quite a bit; some state a temperature of around 1300 Kelvin (~1000 degree Celsius, or ~1800 degree Fahrenheit) and some even state it at around 2300 K (~2000 °C, or ~3600 °F). I went for the middle of these values, and decided for a temperature of 1800 K, which equals to around ~1500 °C or 2800 °F. This is the tempereatre (color) we should align our candle sprite texture to, in order to yield a convincing congruence in the rendering.

Fig 07



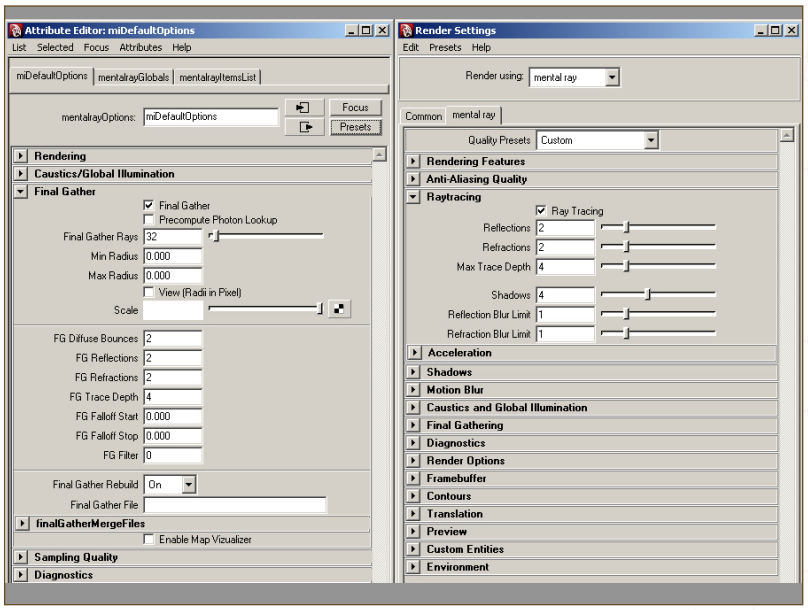
06. There are many Kelvin-to-color converters on the internet which we could use to obtain the desired color, but luckily there is also a built-in tool that ships with mental ray for Maya. It is called mib_blackbody and can be found under the mental ray lights tab of the 'Create Render Node' menu in the hypershade (Fig06).

Fig 08



07. This node only has two attributes we need; the temperature (in Kelvin, or 'absolute' temperature), and an intensity value (Fig07). If we wanted to really (really!) exactly simulate a candle light, or any light at all, we would have to actually know it's luminous power, also called luminous flux or lumen (read on this link for further information: http://mentalraytips.blogspot.com/search/label/photometry), and then we would have to convert this value into the Maya/mental ray world with some effort on both the emitting (light) and receiving (camera) side. Maya 2008 has some built-in improvements on this, however, since we don't do a radio-/photometric scientific simulation we simply GUESSTIMATE the intensity. I went for a value of 2500. To finally make use of this little tool, I connect it to the light's color slot - the light's intensity is left at 1.0 (this is handled by the mib_blackbody), and I also make sure the decay rate is set to 'Quadratic'.

Fig 09



That's pretty much it for the scene part, lets head over to the rendering department.

08. We prepare the final gathering settings for quick yet meaningful convergence of the indirect illumination (Fig08). We only need a few rays

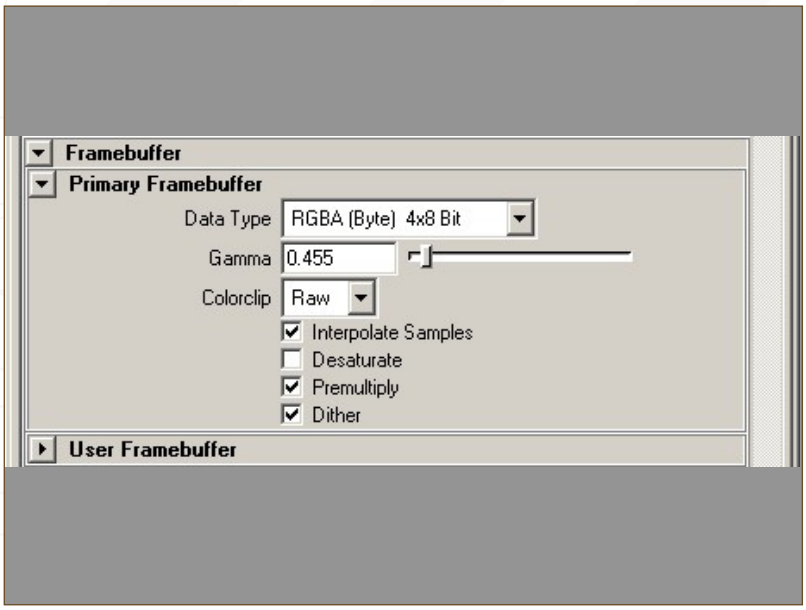


Fig 10

(32) and a coarse point density (0.5) for our preview. Of course we will refine everything for our final image. I left the final gather 'mode' at automatic, i.e. the 'Optimize for Animations' and 'Use Radius Quality Control' are kept OFF.

09. The trace depths however need to be increased, along with the general raytracing settings; I decided for 2 'bounces', for the diffuse contribution, which I revise in the miDefaultOptions node (Fig09): although I turn them ON in the render globals, they are stuck at 1 bounce due to a little bug. I want them to be of depth 2, so I adjust them 'under the hood' in the miDefaultOptions.

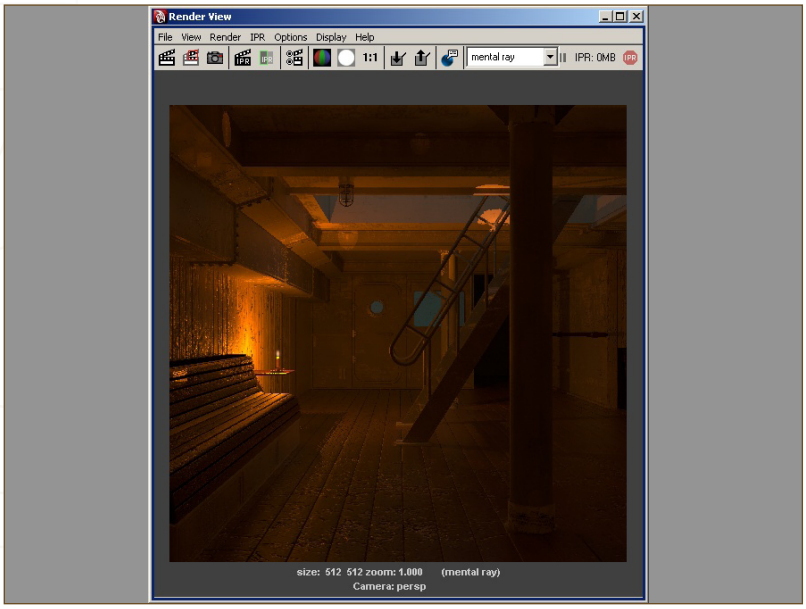


Fig 11

Before we actually render, we must take care over the color space, so its time for our little gamma-mantra (since we dont want odd and cg-ish looking, grungy true-linear shadings). Thus we put ourselves into the right color space, which is sRGB, the commonly used space for things like photographs. Although we cannot precisely apply this color profile right away (at least not easily in mental ray for Maya 8.5), we simply apply a so called gamma correction curve with a value of 2.2 to our image, which usually is sufficient. This implies some caution: because the textures we usually use are already in sRGB, or hence gamma corrected, we need to un-gamma them before we correct the whole image again. This seems awkward and unnecessary but makes total sense for a reason - if we want the (gamma corrected/sRGB) texture to look like we are used it to looking, we need to remove the gamma correction first, before we RE-apply it on the whole image. Odd notion, but makes our picture look pretty and more natural.

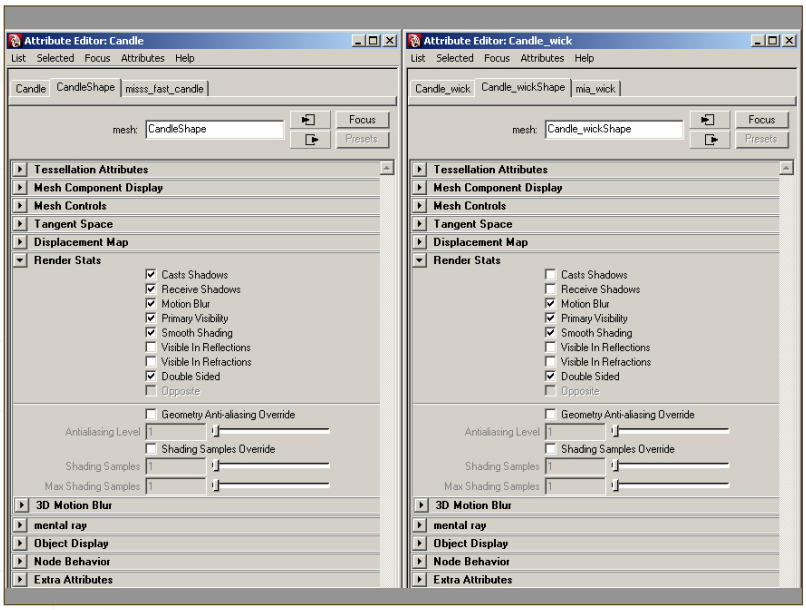


Fig 12

10. Thankfully mental ray has this remove-texture-gamma-and-re-apply-it thing built in already, and we simply set the desired gamma correction value in the frame buffer>primary framebuffer tab of the render globals (Fig10). However, mental ray wants us to actually specify the inverted function, which is 1/2.2=0.455 in our case. For more information

on the gamma issue, I encourage you to read the 'Note on Color Space' in the very first part of this tutorial series.

11. A quick test render yields some strange, blotchy artifacts though (Fig11). This is due to the close proximity of certain objects to the area light - we would have to either move them (or the light) a little farther away, or exclude them from the final gathering and reflection/refraction computation somehow. Since we obviously have a great demand to keep the light close to the candle, we are forced to take the latter solution.

12. We simply switch OFF the corresponding render flags in the candle's and wick's shape node (Fig12). This basically cures the bright-blotches-problem. To furthermore suppress these kinds of blotches, I decided to use a final gathering filter of 1. This filter should be handled with care, and only be used as a last resort.

13. Another test rendering verifies this (Fig13), and we have take off clearance. Lets raise the quality to something more usable (which basically means we are extending the flaps, to continue the metaphor).

14 . First, lets raise the general sampling settings (Fig14). The minimum level is kept at 0, the maximum level is set to 2, which means a maximum of 4^2, or 16 samples per pixel (whereas the rule is 4^n, and n means the sampling level). The contrast is lowered to 0.05 each. I usually use a narrowed gauss filter of width 2.0 (default is 3.0!) both in x and y, which gives sharp, fast and nice sample filtering.

15. In the end, lets give the final gathering a final quality (Fig15). I increased the rays (accuracy) to 64, and the point density to 2.0, which should be more than enough for our still image.

Fig 13

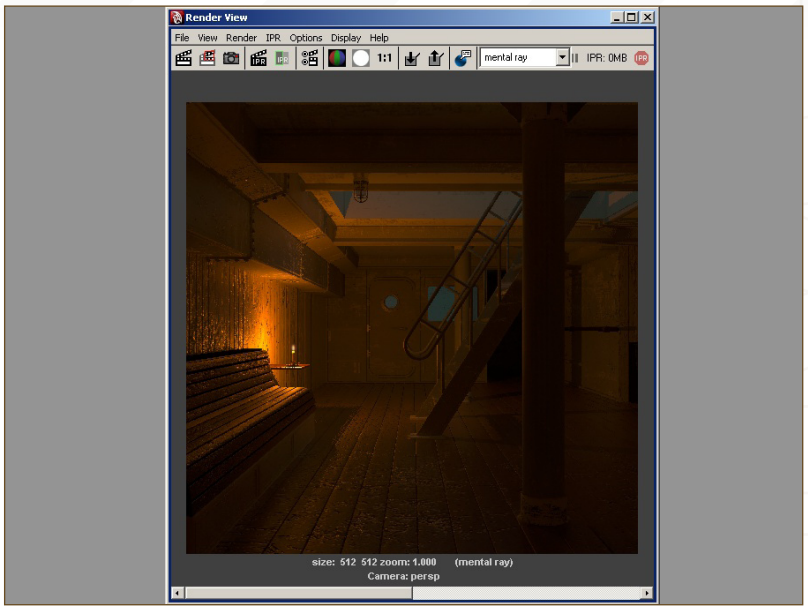


Fig 14

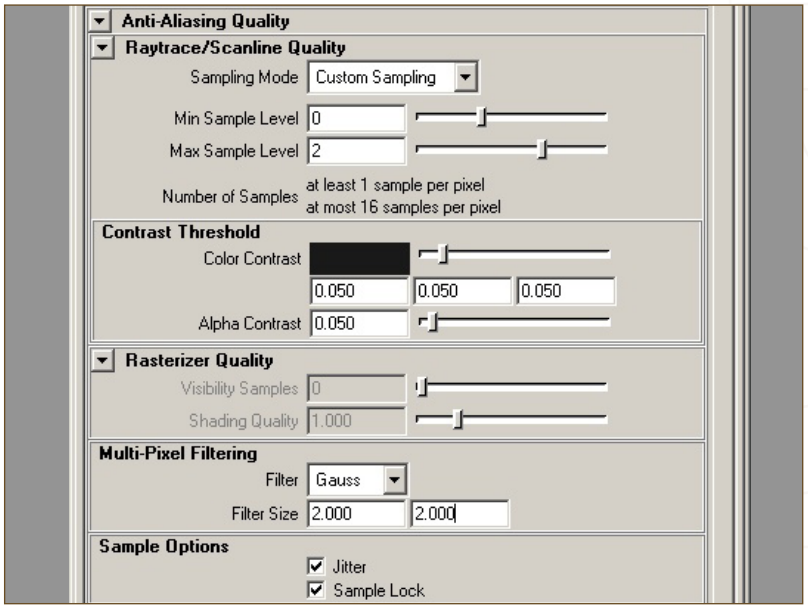
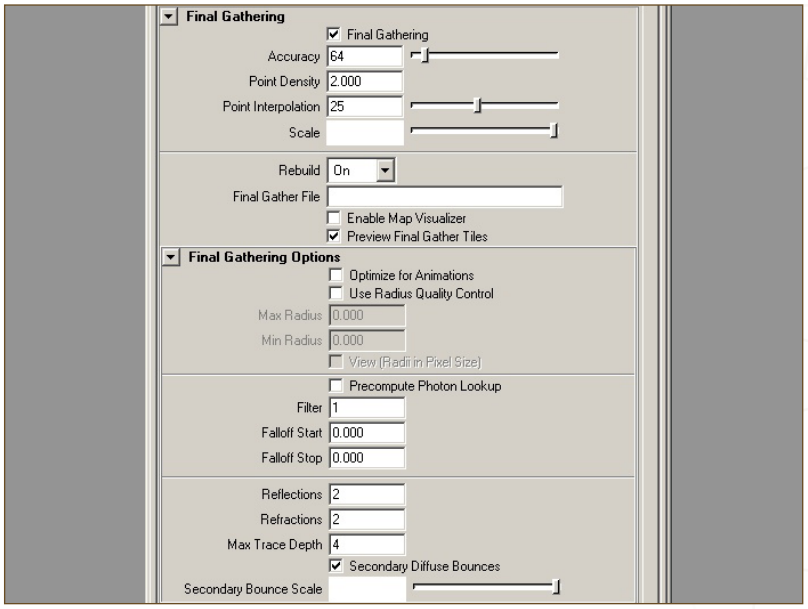


Fig 15



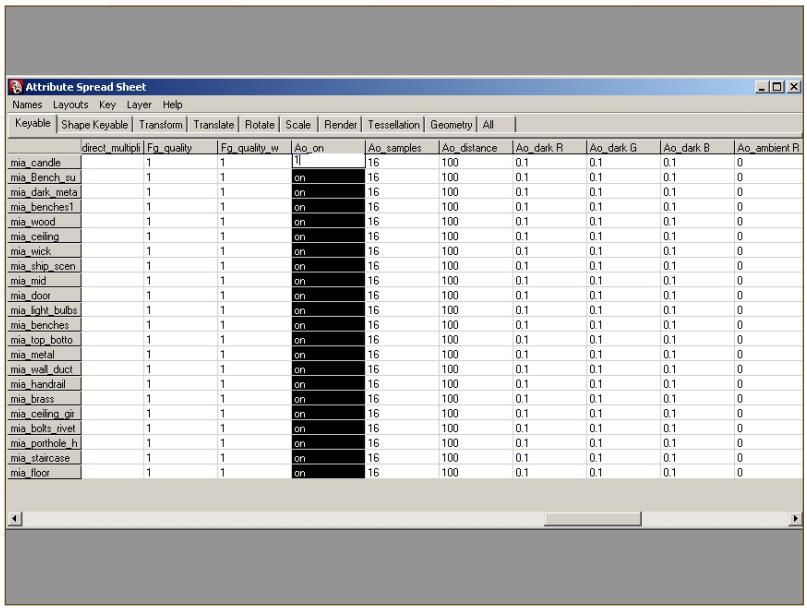


Fig 16

16. I also turned on the 'detail ambient occlusion' mode of the mia shaders. All you need to do is to select all the mia shaders in the hypershade, open up the attribute spread sheet, and set the Ao_on attriubte to 1 (ON) (Fig16). This ensures we see all the little details that are too small to be captured properly by a rather coarse final gathering solution.

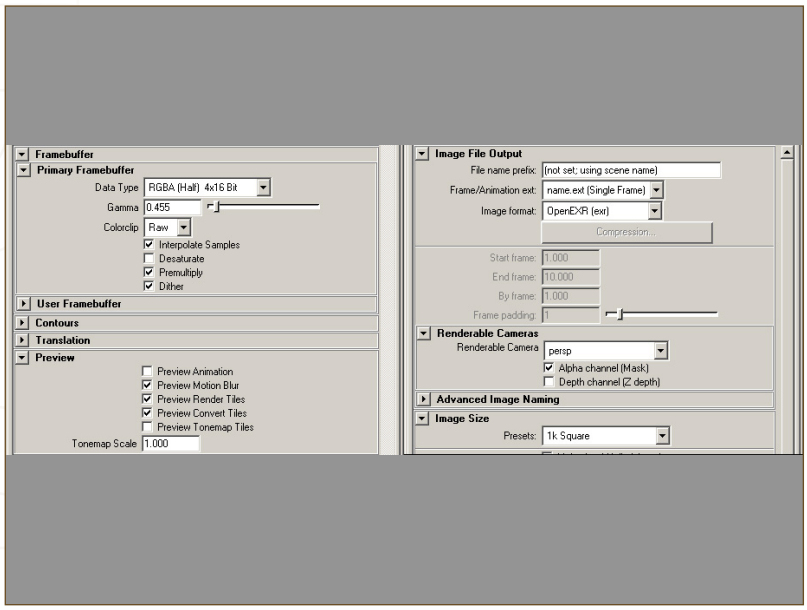


Fig 17

17. Last but not least, we could go for a floating point framebuffer, if we liked. To do so from within the render view and without going to a batch, we simply had to switch the framebuffer to either RGBA (Float), or RGBA (Half), turn the 'Preview Convert Tiles' ON, the 'Preview Tonemap Tiles' OFF, and use an appropriate file format, like OpenEXR (Fig17).



Fig 18

18. Thats it. I came up with this final interpretation, after going through a few color, white-balance and contrast image operations (Fig18).

I hope you enjoyed following our little candle light exercise as much as I enjoyed writing it! I'd be glad to welcome you next time to our final part, which is probably the most challenging and most definitely the eeriest one: about underwater lighting!



Originally designed & modelled by:
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Eva Wild

Female Characters Creation

Introduction:

The 'Eva Wild Series' – Our aim in this series is to provide comprehensive lessons to produce a complete fully rigged, textured and anatomically correct female character. This series fits well into 3 DVDs with 3 separate professional 3ds Max instructors taking you through each if their specialties in very detailed step by step processes making this training suitable for artists of all levels.



Part 1 - Modelling:

- Complete step by step modelling of the Eva Wild character.
- Teaches the importance of studying human anatomy.
- Provides clear diagrams showing muscle flow and bone structure.
- 14 hours of comprehensive training.
- Suitable for artist of all levels.



Part 2 - Texturing, Mapping & Clothing:

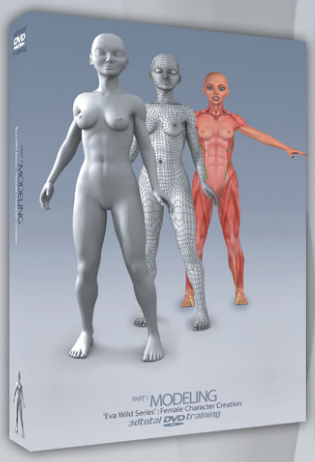
- Complete step by step texturing process of the Eva Wild character.
- Modelling and Texturing of Eva Wild garments.
- Lighting the character.
- 4 hours and 47 mins of comprehensive training.
- Suitable for artist of all levels.

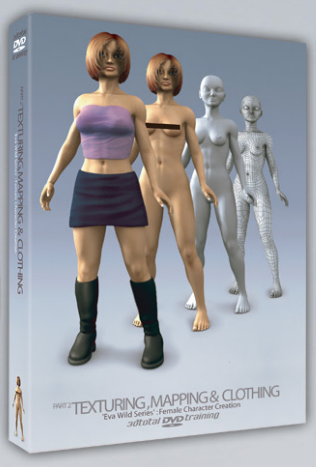


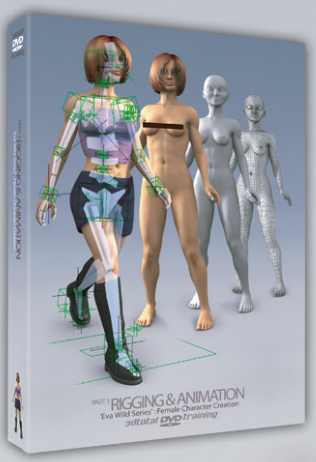
Part 3 - Rigging & Animation

- Complete step by step of setting up a fully animatable rig for the Eva Wild character.
- Creating a walk Cycle.
- Creating a simple face morph.
- 7 hours and 43 mins of comprehensive training.
- Suitable for artist of all levels.









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3D environment lighting

SOFTIMAGE | XSI

'3D Environment Lighting' is our new 6-month tutorial series. Over the course of the next six months, this series will be detailing techniques on lighting an environment under a number of different conditions. Each month we will cover a step-by-step guide to setting up lights, aimed at portraying the scene in a specific manner. The various tutorials will be tailored to specific software packages and each will aim to show a comprehensive and effective way of lighting an interior of a ship that includes both natural and artificial light. These will include a sunny afternoon, sunset, moonlight, electric light, candle light, and finally a submerged submarine light. The schedule is as follows:

Issue 023 July 2007

Natural Exterior Lighting Sunny Afternoon

Issue 024 August 2007

Natural Exterior Lighting Twilight

Issue 025 September 2007

Natural Exterior Lighting Moonlight

Issue 026 October 2007

Artificial Interior Lighting Electrical

Issue 027 November 2007

Artificial Interior Lighting Candlelight

Issue 028 December 2007

Artificial Exterior Lighting Underwater

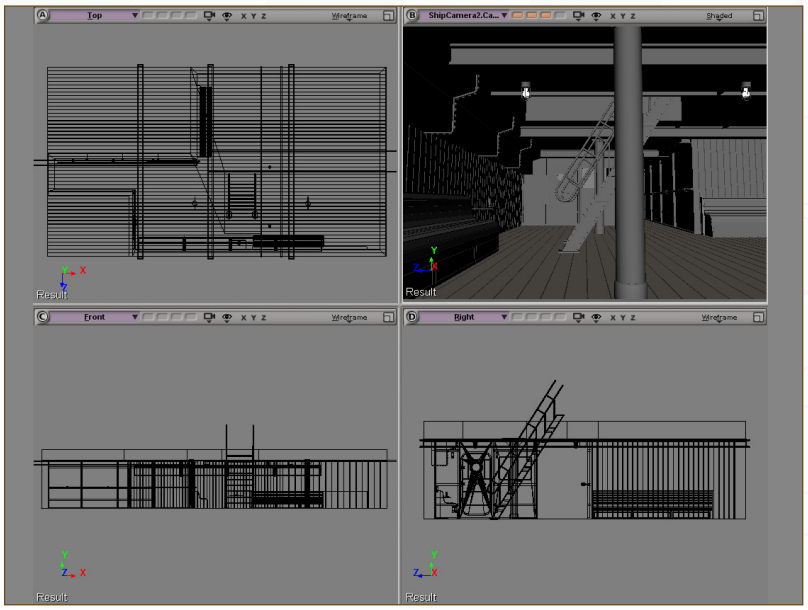
Enjoy ...

ENVIRONMENTAL LIGHTING PART 5 - CANDLELIGHT

This time we'll see how to light the ship cabin with some candles. Only one candle will be visibile, on the left of the room; the other two will just light the scene and cast shadows, but will be out of view (one on the right, and one in the back of the room).

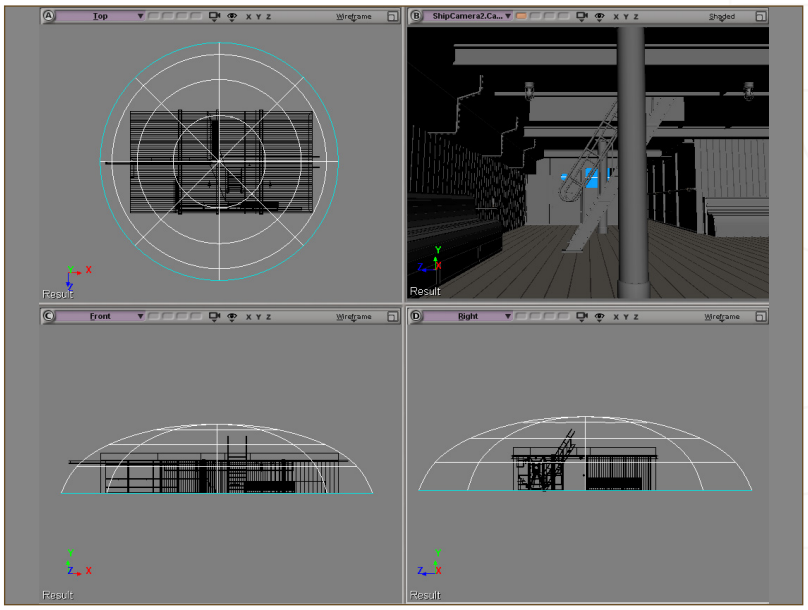
01. Open the 3DENV_Part5_CANDLE_Start.scn scene file. (Fig01)

Fig 01



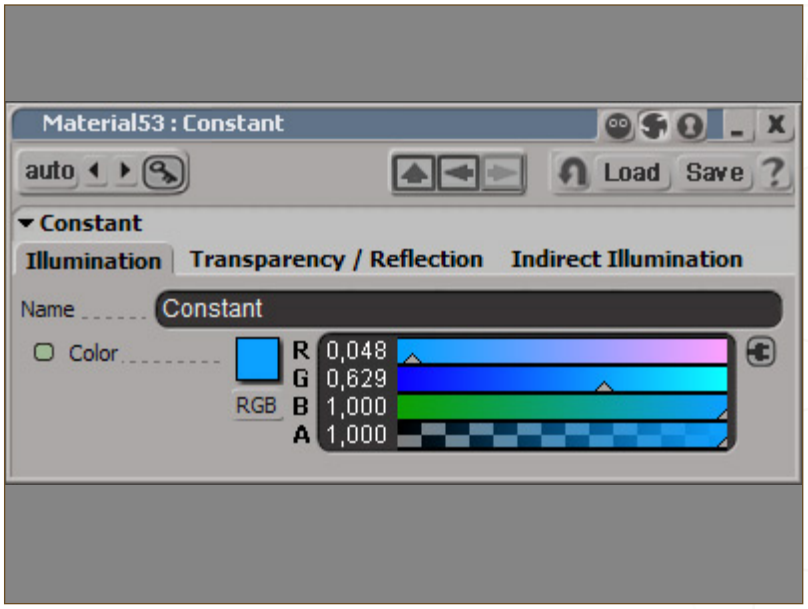
02. First of all, we need to create a soft, ambient lighting for our scene, which will resemble a night time situation. Create a polygonal sphere which surrounds the whole scene. Select the lower half of the sphere and delete it. Select all the remaining polygons and flip them to make them point inward. (Fig02)

Fig 02



03. Create a new Constant material with a blueish color and assign it to the sphere. (Fig03)

Fig 03



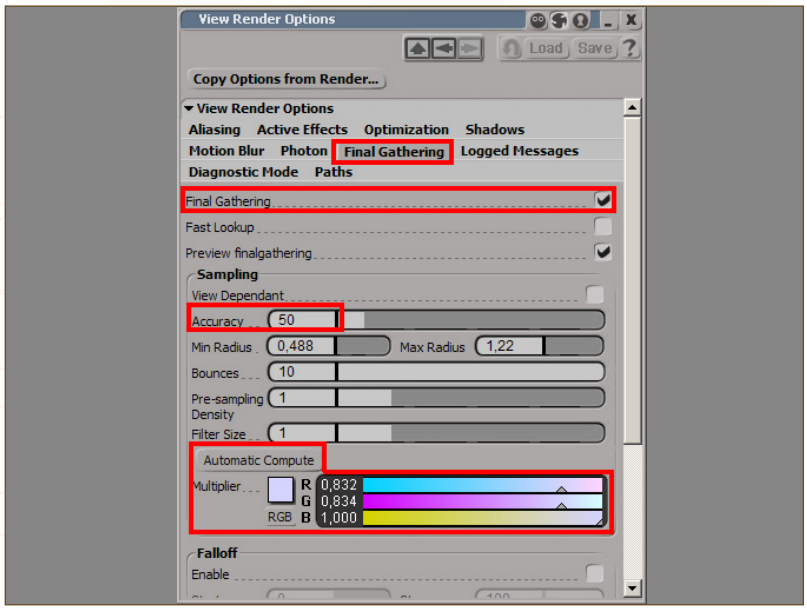


Fig 04

04. Open the Region rendering property page and enable Final Gathering (Fig04). Set the Accuracy to a low value for now (50 will be ok) and hit the Automatic Compute button.

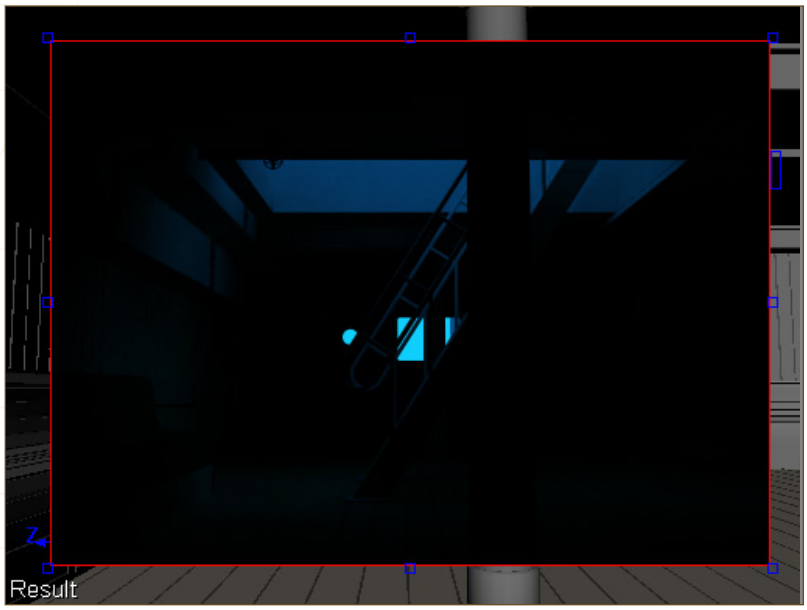


Fig 05

05. Do a quick render region test to see what's happening. (Fig05)

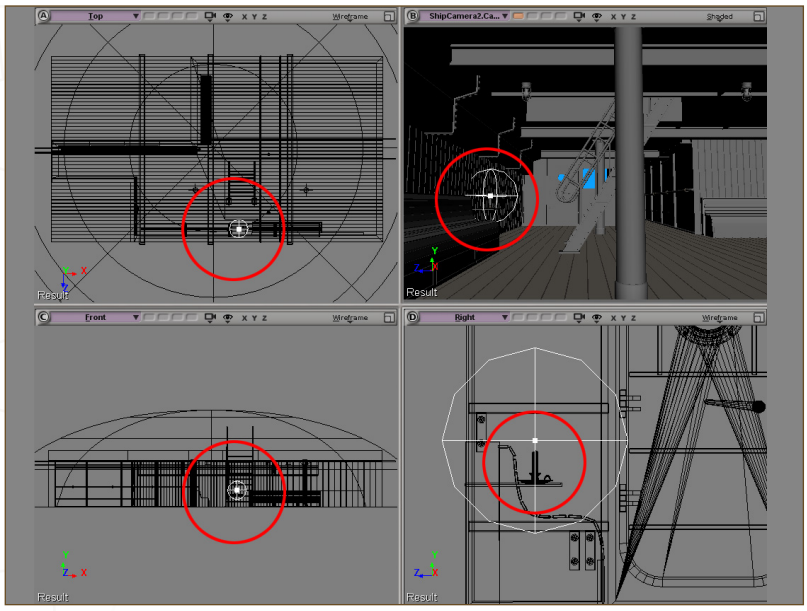
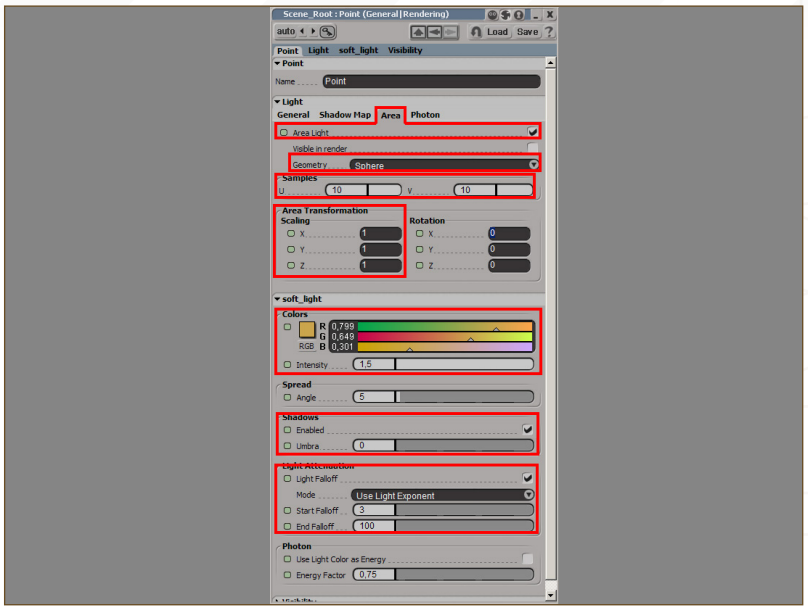


Fig 06

06. Once you're satisfied with the basic nocturnal ambient light, we can go on and create the first Point light which will act like a candle light. (Fig06)

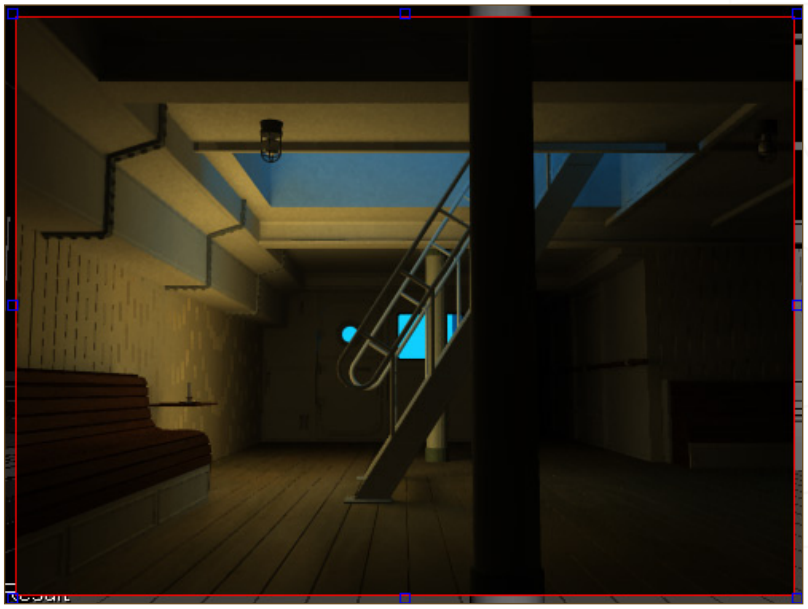
07. Open the light's property page and copy the parameters from Fig07. Don't forget to enable Area shadows and set the parameters for it, too.

Fig 07



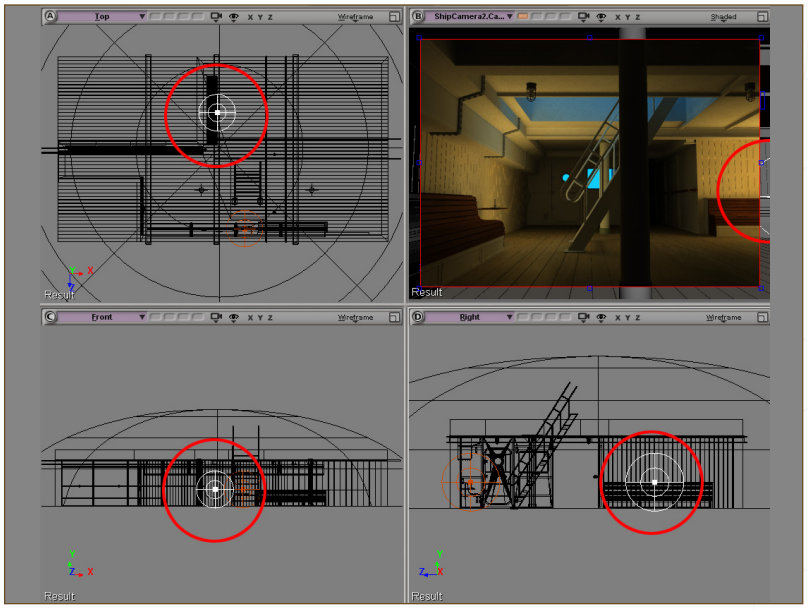
08. Do another render region test. (Fig08)

Fig 08



09. Now duplicate the Point light and position it close to the seat in the right part of the scene, just out of view. (Fig09)

Fig 09



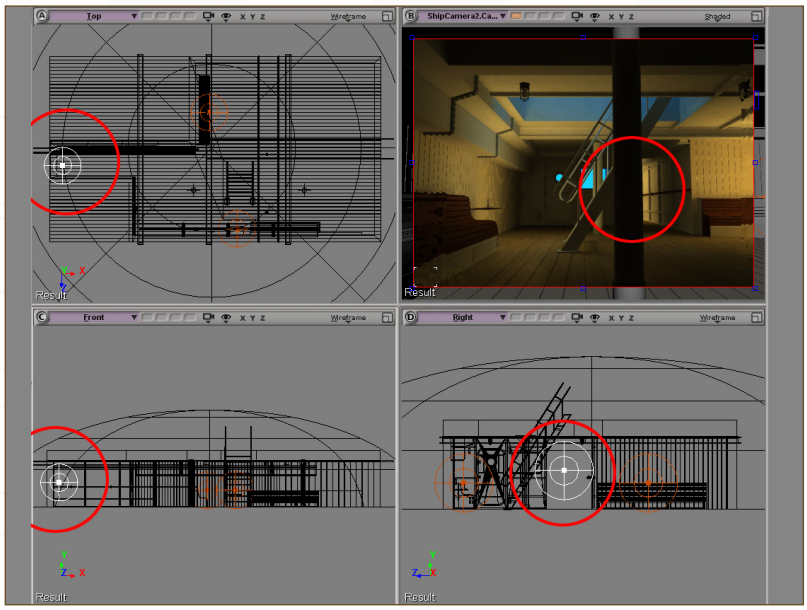


Fig 10

10. Create a third copy of the Point light and position it in the back of the room, as shown in Fig10. Refresh the Render region.

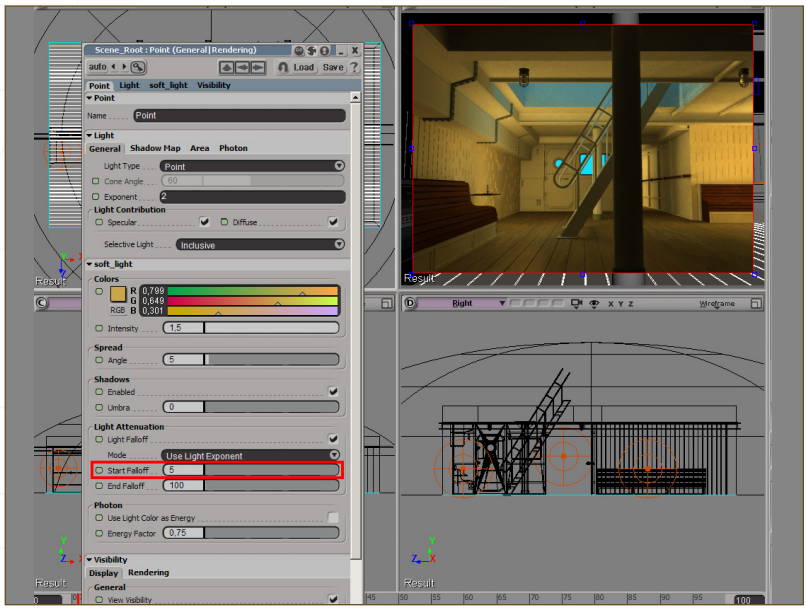


Fig 11

11. Set the Start Falloff for the first light to 5, and render again. (Fig11)

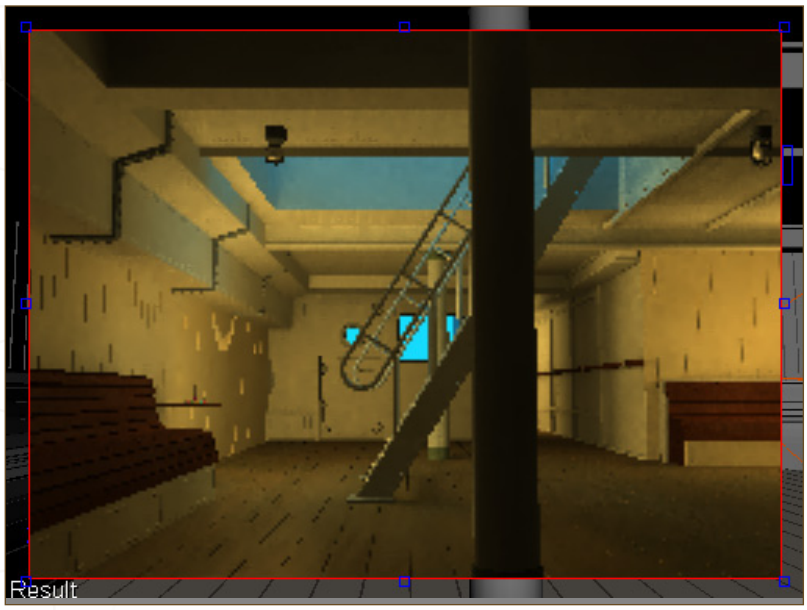
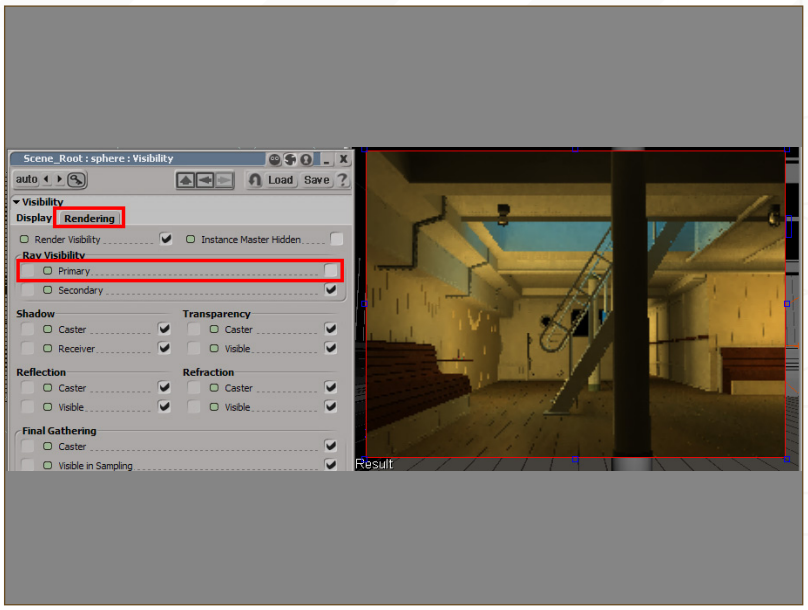


Fig 12

12. Play a little with the falloff parameters of the various light, until you find the best “mood” for your scene. Try not to make the lights too bright. (Fig12)

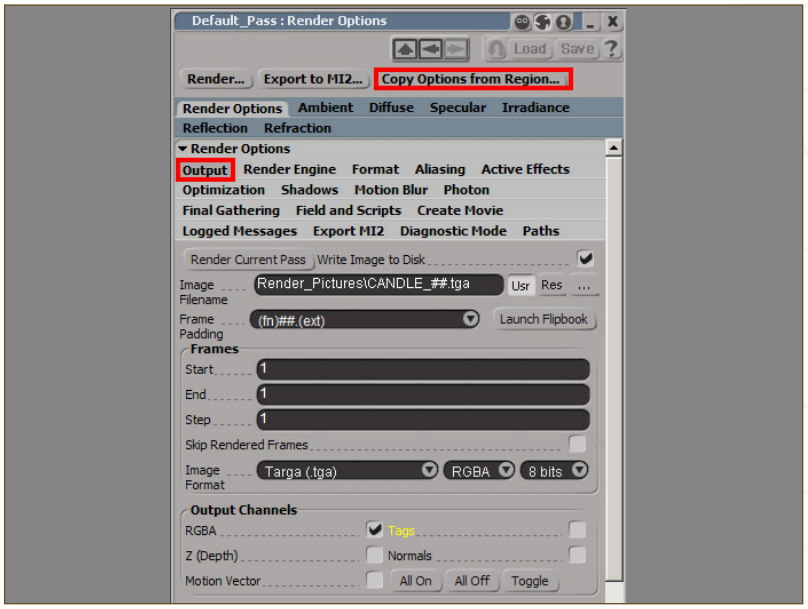
13. Select the sphere and open its Visibility options. In the Rendering tab, disable the Primary visibility, so it will not be visible in the rendering and you will be able to change the background color later in Photoshop. (Fig13)

Fig 13



14. Now we're ready to set the final rendering. Open the Render property page and hit the Copy Options from Region button; this will transfer all the rendering parameters from the Render Region to the Render panel. Enter a name for the output picture and pick TGA as file format (this will help to keep information about the alpha channel in the rendered picture). (Fig14)

Fig 14



15. In the Aliasing tab, set the Min./Max. Values to -2/1. Change the Filter type to Mitchell and the Threshold values to 0,02, as shown in Fig15.

Fig 15

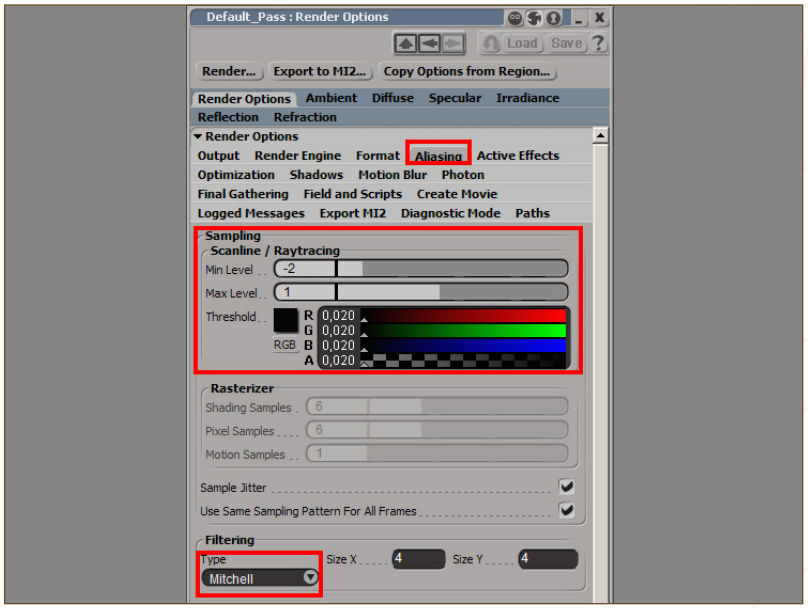




Fig 16

16. Render the current pass. (Fig16)

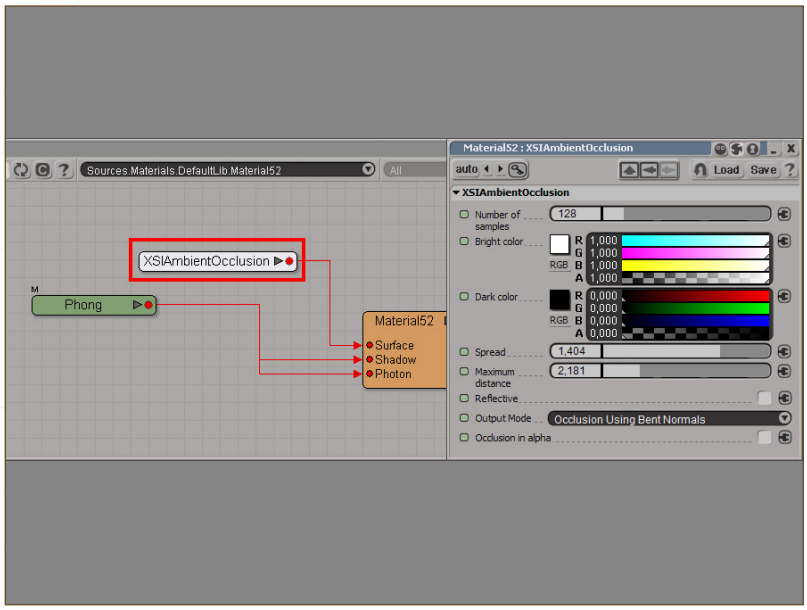


Fig 17

17. Now we also need an Ambient Occlusion pass to enhance the details. Open the 3DENV_Part5_CANDLE_AO.scn scene file. A new AO shader was created and assigned to every object in the scene. You can see its parameters inf Fig17.

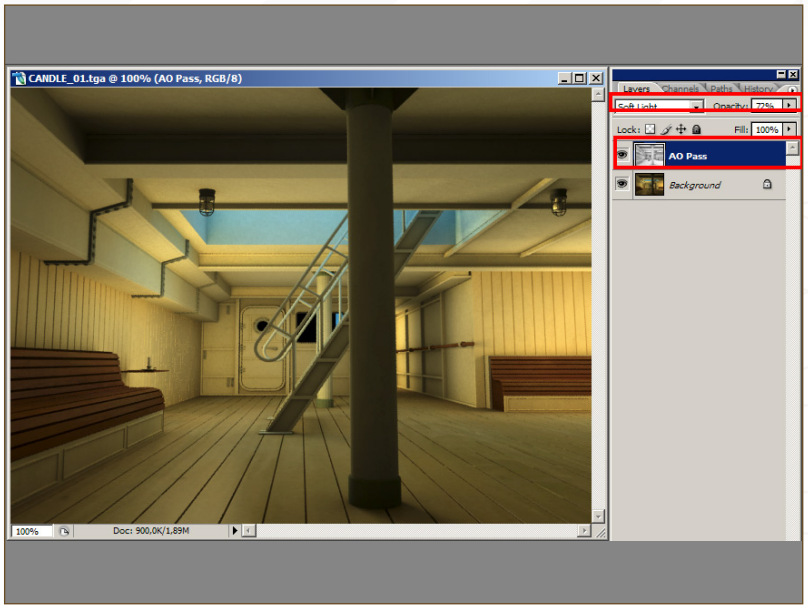


Fig 18

18. Render the AO pass and save it as a picture, too. (Fig18)

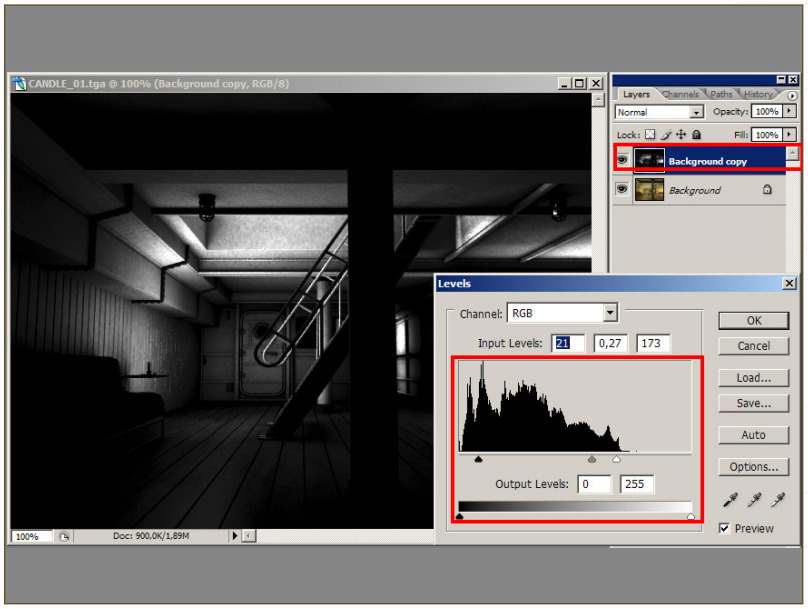
19. Open both the original rendering and the AO pass in Photoshop or similar 2D applications. Select the AO pass, copy it and paste it over the original rendering picture. Change its blending mode to Soft Light and its Opacity to about 72%. (Fig19)

Fig 19



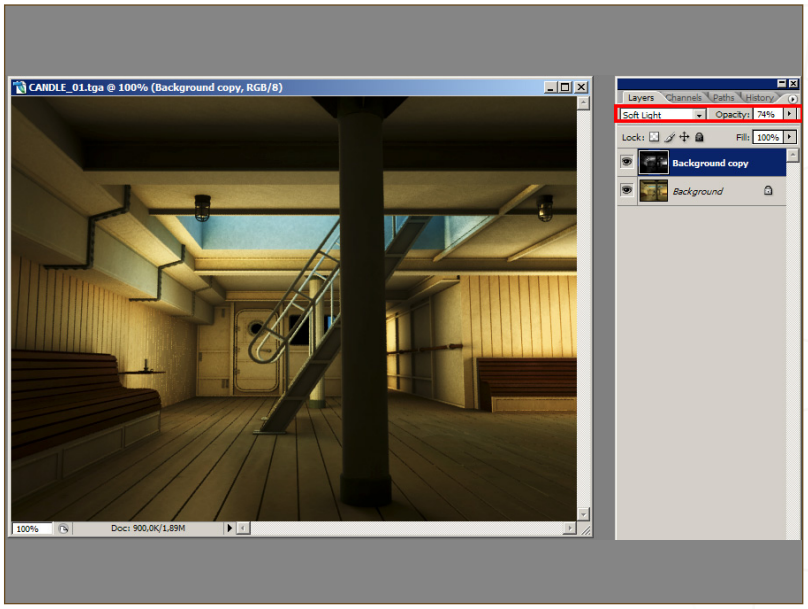
20. Flatten the two layers together and create a copy of the Background layer. Desaturate it and use the Levels tool to enhance the brightest areas in the picture. (Fig20)

Fig 20



21. Change the blending mode to Soft Light and set the Opacity value for this new layer to 74%. (Fig21)

Fig 21



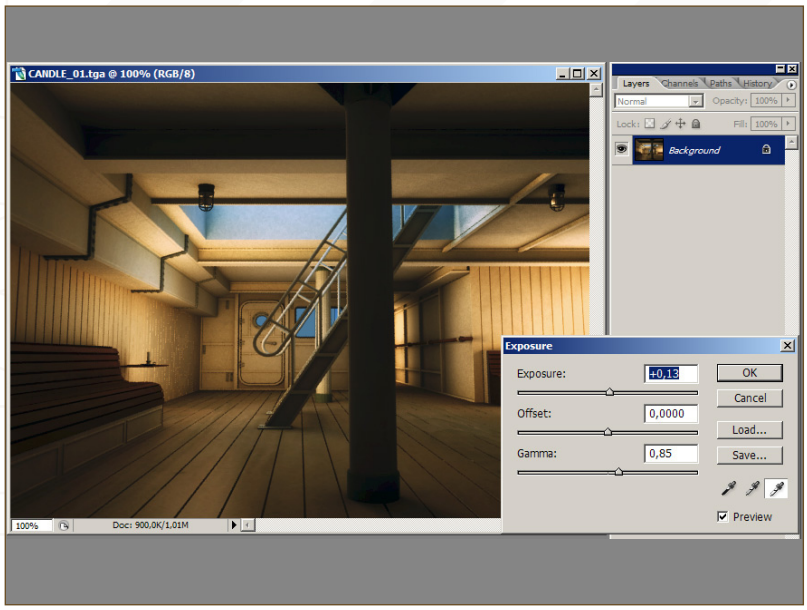


Fig 22

22. Flatten all the layers together and use the Exposure tool to enhance the exposure of the picture. You can also use the Lens Flare effect on a new layer to create the flame effect on the visible candle. (Fig22)





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RICHARD TILBURY

Tutorial by:
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